

Pardon the Interruption Meeting March 2008





John F. Kennedy Space Center

LRO-LCROSS / LCROSS Project Summary

LAUNCH SERVICES PROGRAM

Mission	LRO-LCROSS / LCROSS
Launch Date	2008/10/28
Launch Vehicle	Atlas V
Launch Period Window	0
PPF	ASO-KSC

OVERALL MISSION

Jan	Feb	Mar
Y	Y	0

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

Jan	Feb	Mar
G	G	G
G	G	Y
G	G	G
G	G	G
G	G	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

Jan	Feb	Mar
G	G	0
G	G	0
G	G	0
G	G	0
G	0	0

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

Jan	Feb	Mar
Y	Y	0
Y	Y	0
Y	Y	0
G	G	0

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

Y	Y	0
Y	Y	0
N/A	N/A	0
G	G	0
Y	G	0
G	G	0
G	G	0

COMM & TELEMETRY

Communications
Telemetry

G	G	G
0	0	0

BUSINESS

Budget
Contracts

G	G	G
G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

G	G	G
0	0	N/A
G	0	N/A

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LCROSS Project Summary

LAUNCH SERVICES PROGRAM

Mission	LCROSS
Launch Date	2008/10/28
Launch Vehicle	Atlas V
Launch Period Window	0
PPF	ASO-KSC

OVERALL MISSION

Jan	Feb	Mar
G	G	Y

MISSION MANAGEMENT

	Jan	Feb	Mar
Observatory Status	G	G	G
Manifest/Range	G	G	G
Integrated Schedule	G	G	G
ICD	G	G	G
CDRLs (S/C & LSC)	G	G	G

LAUNCH SITE

	Jan	Feb	Mar
LSSP	G	G	G
Customer Inputs	G	G	G
PPF	G	G	Y
Launch Site Unique	G	G	G
Spacecraft OPS	0	0	0

SAFETY & MISSION ASSURANCE

	Jan	Feb	Mar
Mission Assurance	0	0	0
Safety	0	0	0
Quality	0	0	0
Reliability	0	0	0

ENGINEERING

	Jan	Feb	Mar
Launch Vehicle	0	0	0
Mission Specific	0	0	0
Certification	0	0	0
Mission Analysis	0	0	0
ERS/ERB	0	0	0
Launch PAD/GSE	0	0	0
Mission Unique IV&V	0	0	0

COMM & TELEMETRY

	Jan	Feb	Mar
Communications	G	G	G
Telemetry	0	0	0

BUSINESS

	Jan	Feb	Mar
Budget	G	G	G
Contracts	G	G	0

DOWNRANGE TELEMETRY

	Jan	Feb	Mar
Ground Stations	G	G	G
Deployables	0	0	0
P-3/OTTR	0	0	0

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

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LRO-LCROSS / LCROSS - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

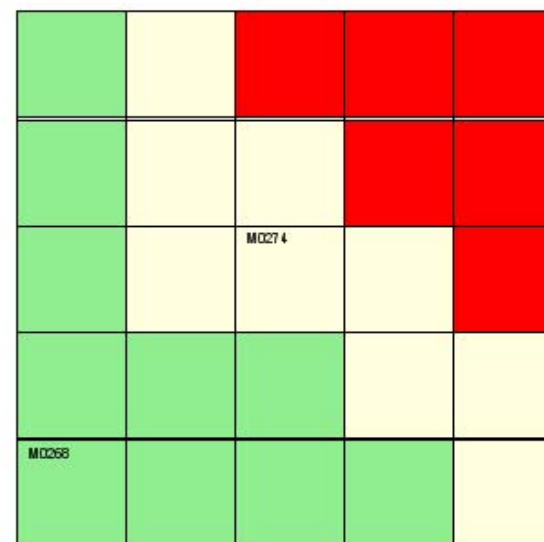
		Condition
RYG Trend	RiskID	Consequence
0	M0268	Condition: The LRO and LCROSS spacecraft have different risk classes (LRO-Class B and LCROSS-Class D) and as a result have different (dissimilar) test requirements. The loads model dynamic uncertainty factor (DUF) for the verification loads cycle for the combined spacecraft stack including launch vehicle elements will have to be agreed upon by four parties (LCROSS, LRO, ULA, and LSP).
		Consequence: May lead one party, in this case LRO, to accept more risk (higher DUF) than they would have if they were flying without LCROSS.
0	M0274	Atlas RP-1 Tank Qualification delay.
		Redesigned RP-1 tank not yet qualified. Slip of Launch Date if not resolved by launch campaign start - 8/01/08.

P
R
C
B

C
F

C
C
C
U
R
R
E
N
C
E

5
91-
100%
4
51-90%
3
11-50%
2
6-
10%
1
1-5%



1 2 3 4 5

IMPACT

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LRO-LCROSS / LCROSS - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	0	LRO contamination requirements are very strict (0.25% obscuration). Special VIF GSE (Clean enclosures) are designed and on contract to support launch site operational use to protect LRO.	WI	09/26/2006	05/01/2008
Mission Management	0	Clarification of Mission Success Expectations and hand-off state between LSP and LCROSS. OCE needs clear understanding of LSP position on risk tolerance of LCROSS spacecraft to proceed with ERBs on long-duration components and so we can direct Atlas to perform or not perform qualification on Centaur and separation components as appropriate with mission risk tolerance.	WI	5/01/07	1/30/08
Engineering	0	Launch Vehicle issues that were being tracked for SDO, will now be watch items for LRO-LCROSS since SDO launch is now NET Jan 2009.	WI	8/14/07	8/01/08
Safety and Mission Assurance	0	Launch Vehicle RP-1 Tank Qualification Schedule.	WI	6/1/07	8/01/08
Safety and Mission Assurance	0	LCROSS S/C MSPSP - not getting updates as agreed to by PSWG.	WI	11/13/07	3/01/08
Engineering	0	Special LRO over LCROSS PPF stacking access stands. Preliminary design presented at MUPDR.	WI	11/13/07	5/30/08
Engineering	0	RP-1 Tank Requalification Schedule delays. Dan Johnson has submitted formal LSP Risk for this issue. (LSP Risk M0274)	M0274/ERS-06-305	11/13/07	6/30/08

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LRO-LCROSS / LCROSS - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
ATP Launch Services	8/17/2006
LRO Mission CDR	11/6/2006-11/9/2006
LCROSS Mission PDR	9/6/2006-9/8/2006
LCROSS Mission CDR	2/21-23/2007
LRO/LCROSS Requirements TIM	8/24/2006
LRO/LCROSS Kick-off MIWG	9/25/06-9/26/06
GOWG #1	11/28/2006-11/30/2006
LCROSS Confirmation Review	1/19/2007
LRO/LCROSS MURR	02/28/2007-02/28/2007
LV Mission Unique Requirements Review (MURR) complete	2/28/07-2/28/07
MIWG3/GOWG2/LV Mission Briefing to Range Safety	4/10/07-4/12/07
Early confidence testing of LRO TM, LCROSS discrete SIL, elec connectors pull test.	4/17/07-5/25/07
First round of CPWSR data released	5/25/07-6/21/07
MIWG 4 - Denver (ICD Release, and Avionics Splinter, EICD and MICD Review)	8/7/07-8/9/07
Received summary of white paper from LCROSS clarifying risk acceptance/tolerance (Class D.) Final White Paper received July 13, 2007.	6/22/07-7/15/07
Long duration Centaur contamination sources and residuals analysis. (White paint, abrasion overwrap, foam outgassing, resid H2O, & resid. propellants.) Results in 12/17/07 Memo - presentation at March MIWG.	4/01/07-12/31/07
MUPDR	11/06/07-11/07/07

Planned	
MUCDR - moved out to early June	06/03/2008-06/04/2008
Commercial PPF contract (CLIN) in place for LRO and LCROSS processing.	10/30/07-04/30/2008
LRO Match-mate & Shock test @ GSFC	05/01/2008-05/15/2008
LCROSS Matchmate @ NGST	4/15/08-4/18/08
MIWG #6 (NGST - Redondo Beach)	03/17/2008-03/18/2008
GOWG #4	04/09/2008-04/09/2008
Atlas Test Like You Fly (TLYF) Review	05/07/08-05/08/08

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LCROSS Electrical Connector Development test.	6/25/07-9/30/07
GOWG 3 - KSC	1/9/08 -1/10/08
Preliminary Release of LRO & LCROSS LSSPs.	10/30/07-11/30/07
ICD Baseline release (4 parties -Atlas, LSP, LRO, & LCROSS)	9/14/07-1/04/08
Preliminary CPWSR Data deliveries.	6/21/07-7/18/07
Final Loads Cycle Report Complete/Documented.	8/7/07-9/18/07
MIWG #5 (GSFC)	12/11/2007-12/12/2007
MUPDR- Reconvene (To close items from MUPDR)	02/20/2008-02/20/2008

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LRO-LCROSS / LCROSS Mission Management

Charles Tatro

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

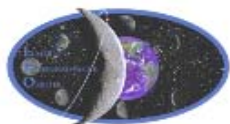
Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD



ICD

There are no signed SCNs

LRO-LCROSS / LCROSS
2008/10/28
Lunar Trajectory
Atlas V
0
ASO-KSC
2000 (LRO)
SLC 41

Jan Feb Mar

G	G	G
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There are no SCNs in Review

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jan Feb Mar

G	G	G
Y	Y	Y
G	G	G
G	G	G
G	G	G
0	0	G
Y	Y	Y

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	Y
G	G	G
0	0	N/A
G	0	N/A

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

Other

LPRP, S/C Mgmt - GSFC & ARCs

Craig Tooley/ Dan Andrews

Tom Jones/ Tom Luzod

Charles Tatro

Diana Calero

Mark Shugg

Harold Coleman

Ken Hale

Marty Loughheed

Mike Patton

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John F. Kennedy Space Center

LCROSS Mission Management

Charles Tatro

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

LCROSS
2008/10/28
LGALRO
Atlas V
0
ASO-KSC
<100
SLC 41

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jan Feb Mar

G	G	G
G	G	G
G	G	G
G	G	Y
G	G	G
0	0	0
G	G	G

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

AMES

LPRP/ESMD

Dan Andrews

Tom Luzod

Charles Tatro

Norman Beck, Jr.

William Van Dyke

Harold Coleman

Craig Schreiber

Marty Loughheed

Mike Patton



ICD

Jan Feb Mar

G	G	G
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There are no signed SCNs

There are no SCNs in Review

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	G
G	G	G
0	0	0
0	0	0

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LRO-LCROSS / LCROSS - Engineering

Diana Calero

LAUNCH SERVICES PROGRAM

	Jan	Feb	Mar
Launch Vehicle	Y	Y	0
Payload Fairing	G	G	0
First Stage	G	G	0
Second Stage	G	G	0
Third Stage	N/A	N/A	0
Payload Attach Fitting	G	G	0
Other	G	G	0
Mission Specific	Y	Y	0
Certification	N/A	N/A	0
Mission Analysis	G	G	0
ERS/ERB	Y	G	0
Launch PAD/GSE	G	G	0
Mission Unique IV&V	G	G	0

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	177
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)
LRO Clean Enclosure GSE

MISSION UNIQUE STUDIES (IF APPLICABLE)
Modal sensitivity analysis due to LCROSS SC modal uncertainty

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LRO-LCROSS / LCROSS - Mission ERB Status

Diana Calero

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	ERS 06-401	LRO/LCROSS ICD	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS 06-397	LRO/LCROSS MURR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS 06-398	LRO/LCROSS MUPDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS 06-399	LRO/LCROSS MUCDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS 06-400	LRO/LCROSS MPDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-136	LCROSS Separation System Thermal. Sep System Test plan in work Environment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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LRO-LCROSS / LCROSS - Vehicle ERB Status

Diana Calero

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	ERS-05-196	Atlas V - Thermal Assessment and Redesign of Single Pneumatics Panel [long coast]	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS-05-345	Centaur Large Helium Bottle (LHB) COPV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS-03-609 /ERS-06-305	Atlas V - Booster RP Tank / Atlas V RP Tank Long Term Redesign	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	ERS-06-21	AV-010 Post Flight Data Review (First Article)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-204	Centaur performance degradation for NRO mission	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	06-081	Atlas-V Data Investigation, AV-010-009 measurement booster pod exceedance	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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LRO-LCROSS / LCROSS - Launch Site

Mark Shugg

LAUNCH SERVICES PROGRAM

	Jan	Feb	Mar
LSSP	G	G	0

LSSP	Planned	Released
Preliminary	9/30/2007	10/25/07
Baseline	3/27/2008	

	Jan	Feb	Mar
CUSTOMER INPUTS	G	G	0

	Jan	Feb	Mar
DELIVERABLES			
Security and Badging	G	G	0
Training and Personnel Cert	G	G	0
Contingency Plans	G	G	0
Safety LSIM	G	G	0
Radiation Control	N/A	0	0
Operational Plans	G	G	0

UNIQUE REQUIREMENTS

	Jan	Feb	Mar
LAUNCH SITE UNIQUE	G	G	0
KSC Fueling Service	G	G	0

	Jan	Feb	Mar
PPF	G	G	0
Commercial PPF Contract	G	R	0

	Jan	Feb	Mar
Spacecraft OPS	G	0	0

Sensitive But Unclassified



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LCROSS - Launch Site

William Van Dyke

LAUNCH SERVICES PROGRAM

LSSP

Jan Feb Mar

G	G	G
---	---	---

LSSP	Planned	Released
Preliminary	09/30/2007	11/2/2007
Baseline	03/24/2008	

CUSTOMER INPUTS

Jan Feb Mar

G	G	G
---	---	---

DELIVERABLES

Jan Feb Mar

Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	Y	Y	G
Radiation Control	0	0	0
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Jan Feb Mar

G	G	G
G	G	G

KSC Provided Fueling Service

PPF

G	G	Y
G	Y	Y

Commercial PPF Contract

Spacecraft OPS

0	0	0
---	---	---

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LRO-LCROSS / LCROSS Budget Breakdown

Harold Coleman

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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LCROSS Budget Breakdown

Harold Coleman

LAUNCH SERVICES PROGRAM

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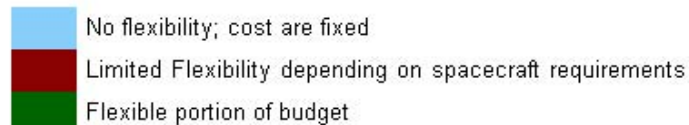
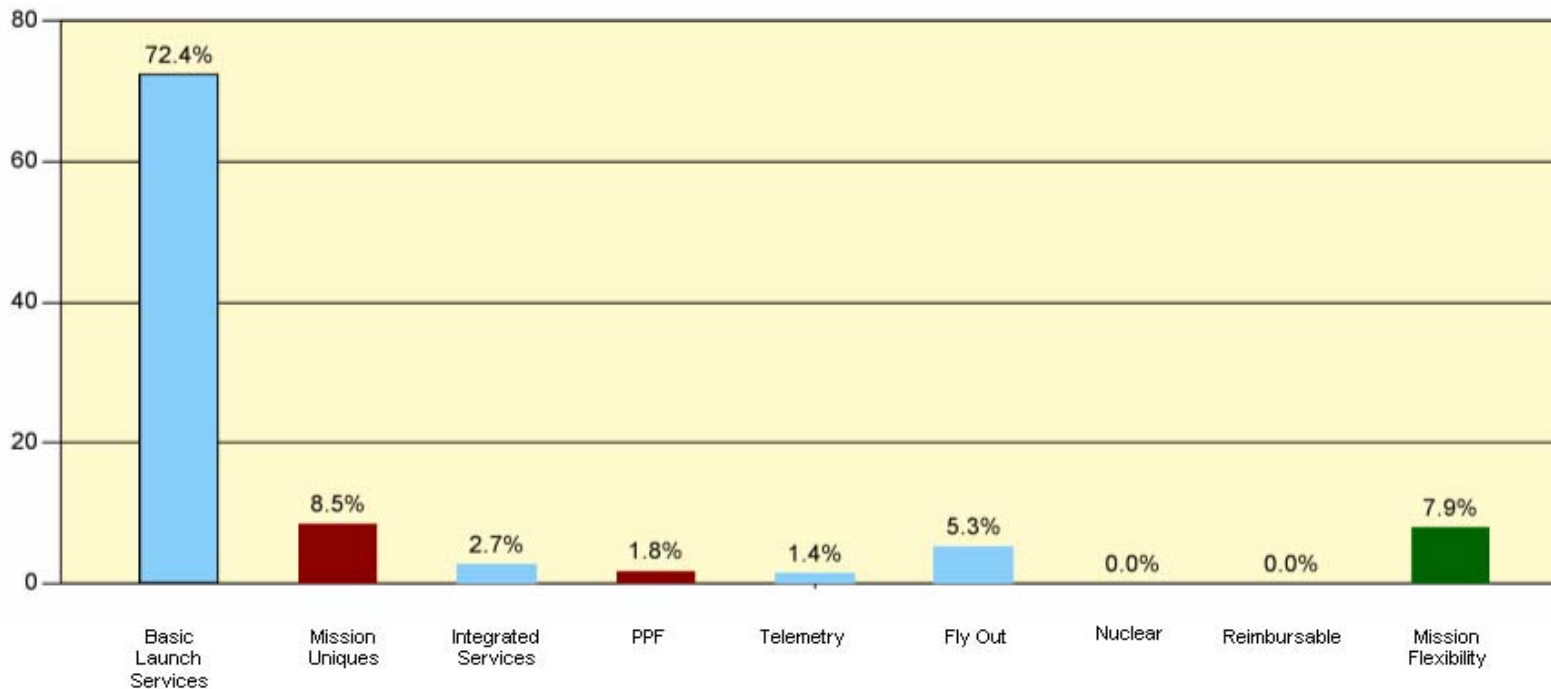
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Launch Services Budget Breakdown LRO-LCROSS / LCROSS Mission

Harold Coleman

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



Notes:

Percentages reflect LRO project only. LCROSS reported separately. Variance from October reporting.

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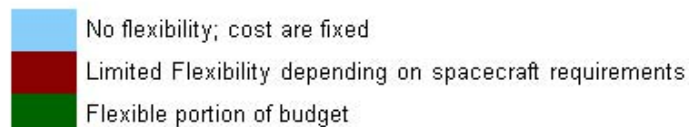
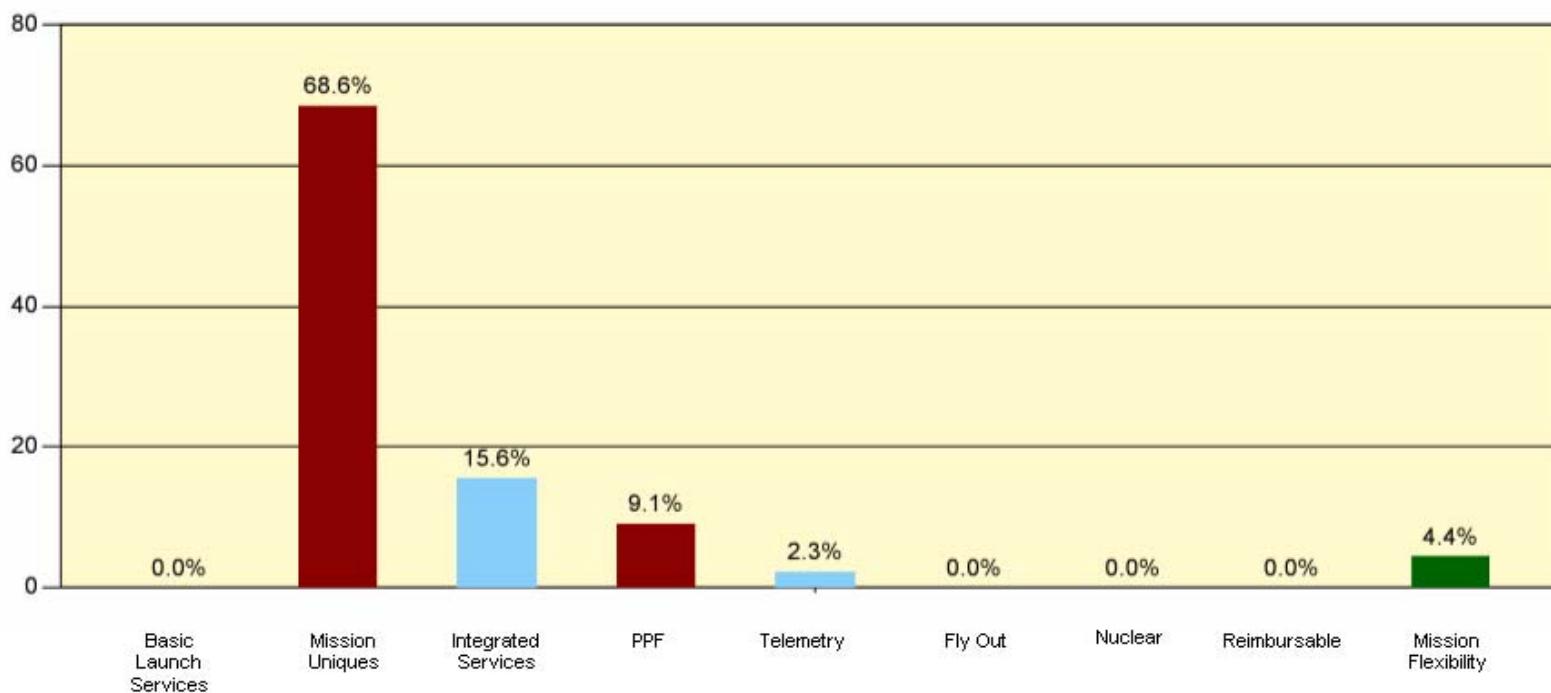
Launch Services Budget Breakdown

LCROSS Mission

Harold Coleman

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



Notes:

Percentages reflect LCROSS project only. LRO reported separately. Variance from April reporting results from a slight increase in Mission Uniques liens to cover projected outreach activities.

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LRO-LCROSS / LCROSS - Business

Harold Coleman

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
G	G	G
G	G	G

Milestone	Date
Milestone #1	8/17/06
Milestone #2	1/31/07
Milestone #3	4/20/07
Milestone #4	05/16/2007
Milestone #5	9/4/07
Milestone #6	12/20/07
Milestone #7	02/26/2008
Milestone #8	4/30/08
Milestone #9	7/31/08
Milestone # 10	10/31/08

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status

Launch Services		
Contract Mod	Number	Description
	NLSB-226	Renamed CLIN 23 "TBD" from "LRO"
	NLSL-086	ATP Standard Service CLIN 8
	NLSL-092	ATP of MUS 4.0 - Enhanced PLA and PLF Cleaning
	NLSL-093	ATP of MUS 8.0a - Test PLA for S/C Testing
	NLSL-098	3% Volume Buy Discount Application
	NLSL-092	ATP of MUS 10.0 - SC Deposition
	NLSL-093	ATP OF MUS 8.0b - Support for S/C Testing
	NLSL-093	ATP of NSS 11.2a - Ultraviolet inspection
	NLSL-093	ATP of NSS 11.2d - Tape Cleaning of PLF

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Contract Mod	Number	Description		
	NLSL-086	ATP of NSS 2.1d - Large Payload Fairing (LPF)		
	NLSL-086	ATP of MUS 2.0 - Interleaved Telemetry		
	NLSL-086	ATP of MUS 3.0 - SC GN2 Grade C Purge		
	NLSL-086	ATP of MUS 5.0 - Real Time Video		
	NLSL-086	ATP of MUS 6.0 - Mission Unique Flight Design and Analyses		
	NLSL-086	ATP of NSS 11.1b - Molecular Contamination Monitoring		
	NLSL-086	ATP of NSS 11.2c - Particulate Fallout Monitoring		
	NLSL-106	Adjust launch window to 10/28/08 - 10/30/08		
	NLSL-116	Add second contingency launch window from November 25 - 27, 2008		
There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLS-075	LCROSS Mission Requirements Update (Centaur Long Duration Study/Analysis)	05/31/2008	
	NLS-076	LCROSS SIL Testing	05/31/2007	06/08/2007
	NLS-077	LCROSS Electrical Connector Development Test (DET)	09/30/2007	10/01/2007
	NLSB-173	Nutation Time Constant Assessment	1/13/06	1/31/06
	NLSB-174	Early Mission Integration Support	11/30/06	1/31/06
	NLSB-189	DIV Launch Vehicle Models	3/6/06	3/20/06
	NLSL-067R2	E-Field Level Analysis and LV Compatibility for LRO S-band Transmission in the Fairing	10/31/2006	11/17/2006
	NLSL-085	Contamination Control Ground Support Equipment (GSE)	11/30/08	
	nlsi-095	Additional Separation Analysis to Support LRO/LCROSS Mission	08/31/2008	
There are no PPF Contract Mods				
There are no Other Contract Mods				

Sensitive But Unclassified

	Issues
G	RFP for PPF Task order has been released; anticipate award in February 2008.
G	Contract Mod for lengthening launch window is in work.

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John F. Kennedy Space Center

LCROSS - Business

Harold Coleman

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
G	G	G
G	G	0

Milestone	Date
-----------	------

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status

Launch Services

Contract Mod	Number	Description
	NLSL-086	ATP of Mission Unique Service (MUS) 11.0 for LCROSS
	NLSL-098	3% Volume Buy discount Application to MUS 11.0

There are no LD Contract Mods

Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSL-075	Mission Requirements Update	5/31/2008	
	NLSL-076	Software Integration Laboratory (SIL) Testing	05/31/2007	06/08/2007
	NLSL-077	Electrical Connector Development Test	09/30/2007	10/01/2007
	NLSL-084	Electrical Connector 7 Pin Qualification	03/15/2008	
	NLSL-085	Contamination Control Ground Support Equipment (GSE)	11/30/2008	

There are no PPF Contract Mods

There are no Other Contract Mods

There are no Issues.

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John F. Kennedy Space
Center

LRO-LCROSS / LCROSS - Safety and Mission Assurance

Ken Hale

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	Jan	Feb	Mar
	Complete	In Work				
Quality				Y	Y	0
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues	Y	G	0
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	0
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LS SMA participated in Mission Success Review (MSR) for the AV-020 RD-180 engine. No significant issues.	G	G	0
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	0
Reliability				G	G	0
FMEA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	0
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	0
Safety				Y	Y	0
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	LCROSS tailoring approved by Range. LRO tailoring under review by Range.	G	G	0
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Working with both Spacecrafts and Range on acceptance of tank welds. Working resolution of access to LRO S/C Fill & Drain valves for emergency offload.	G	G	0
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	0
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Yellow for LCROSS MSPSP. Updates to LCROSS MSPSP have not been received since May 2007. LCROSS to deliver 70% complete MSPSP by March. Will remain yellow until MSPSP is received.	Y	Y	0
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None identified to date.	G	G	0
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Working to identify specific contingency and data impound responsibilities based on LCROSS handoff.	G	G	0
Mission Assurance				Y	Y	0
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	0
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	0
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Assessing qualification of In-Flight Disconnects for LCROSS separation (Risk M0255). Anticipate no significant issue.	Y	G	0
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	AV-09 FIV anomaly investigation.	Y	Y	0
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	0

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John F. Kennedy Space Center

LRO-LCROSS / LCROSS Comm & Telemetry

Marty Loughheed and Mike Patton

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jan	Feb	Mar
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

Jan	Feb	Mar
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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LCROSS Comm & Telemetry

Marty Loughheed and Mike Patton

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jan Feb Mar

G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

Jan Feb Mar

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Sensitive But Unclassified



John F. Kennedy Space Center

SDO Project Summary

LAUNCH SERVICES PROGRAM

Mission	SDO
Launch Date	2008/12/01 (NET)
Launch Vehicle	Atlas V
Launch Period Window	
PPF	Commercial PPF

OVERALL MISSION

Jan	Feb	Mar
G	G	G

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

Jan	Feb	Mar
G	G	G
Y	Y	Y
G	G	G
G	G	G
G	G	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

Jan	Feb	Mar
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

Jan	Feb	Mar
G	G	G
G	G	G
Y	Y	Y
G	G	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

Y	G	G
G	G	G
N/A	N/A	N/A
Y	G	G
G	G	G
G	Y	Y
N/A	N/A	N/A

COMM & TELEMETRY

Communications
Telemetry

G	G	G
0	0	0

BUSINESS

Budget
Contracts

G	G	G
G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Sensitive But Unclassified



John F. Kennedy Space Center

SDO - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

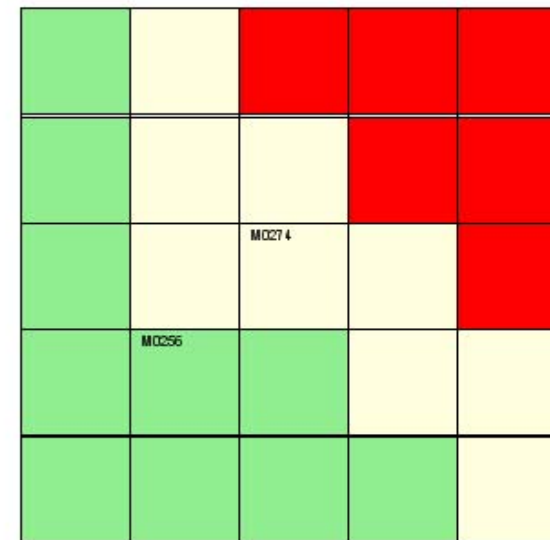
		Condition
RYG Trend	RiskID	Consequence
G	M0256	SDO EMI/EMC test levels are below those recommended by MIL-STD-461E. After system level testing is complete, there are no plans to disposition new sources added to the range.
		Range sources that go on line after SDO testing is complete must be mitigated or they may damage the SC instruments. The mitigation could lead to a delay in processing or an increase in LSP resources.
Y	M0274	Atlas V RP-1 Tank Qual Testing delays have occurred, more expected.
		RP Tank may not be qualified in time to support systems review.

P
R
C
B

C
F

C
C
C
U
R
R
E
N
C
E

5
91-
100%
4
51-90%
3
11-50%
2
6-
10%
1
1-5%



1 2 3 4 5

IMPACT

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SDO - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	G	GSFC uses GEVS for EMI/EMC specifications. It is being interpreted as only testing to "known" transmission sources. Thus the SC may end up being under-tested at low frequencies. SDO will not be testing to susceptibility levels, only performing the minimum of GEVS or known transmitters and relying on range mitigation.	Risk M0256	12 Oct 06	1 Dec 08
Engineering	G	SDO contamination "requirements" are more than typical. SDO requesting extensive verifications and real-time monitoring and alarms. Increased requests for fairing access at the VIF conflict with increased contamination requests. Update: Most issues resolved at 28 Mar MIWG. ICD has been signed, but several TA's need to be worked to resolve remaining issues. Update: Remaining issues resolved at 28 Feb MIWG, but still need to be documented in the ICD.	WI	12 Oct 06	30 Apr 08
Launch Site	Y	Availability of ASO Building 9 East Bay due to LRO.	WI	01/11/2008	09/01/2008
Engineering	G	AV-009 mission had under performing Centaur. Root cause has been attributed to a leaking fuel inlet valve. Most valves in the fleet are similar to the AV-009 valve. A fix for NASA missions has not been identified. Update: A CDR was held for the RL10 redesign to address the valve performance. Redesign approved by the NASA board.	ERS-07-204	18 Jun 07	5 May 08
Engineering	G	This risk is yellow against LRO for launch date of Oct 08. Additional months against SDO launch date of Dec 08 provide sufficient schedule to complete qualification.	M0274		
Engineering	Y	The loads on the spacecraft violate ICD requirements unless the water suppression system is operating. ULA has tried to show compliant loads without the water suppression system, but was unable to do so. If the water suppression system is inoperable, SDO will not be able to launch.	WI	28 Feb 08	30 Mar 08

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SDO - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
Procurement/ ATP	29 Sep 04
SDO CDR @ GSFC	5 Apr 05-7 Apr 05
SDO Adapter to LMSSC Tooling Fitchek	12 Jan 06
Test PLA/SC Test unit fitchek @ GSFC	18 Jul 06
MIWG @ LM/Denver	24 Oct 06-25 Oct 06
GOWG @ Astrotech	11 Oct 06-12 Oct 06
Initial CPWSR delivered	10 Aug 06-7 Feb 07
MIWG/GOWG @ KSC	27 Mar 07-29 Mar 07
Baseline ICD signed	1 Dec 06-8 May 07
SC Propulsion Module Sine Vibe Test	15 Oct 07-17 Oct 07
MIWG @ GSFC	18 Sep 07-19 Sep 07
GO TIM @ ASO	12/05/2007-12/05/2007
MIWG #6 @ Denver	28 Feb 08-28 Feb 08
SDO EMI/EMC Environmental test plan	12 Feb 08

Planned	
Updated CPWSR	11 Dec 07-28 Mar 08
SDO Pre-environmental Review @ GSFC	3/19/08-3/20/08
SDO MPDR	June 2008-June 2008
MIWG/GOWG @ KSC	May 2008-May 2008

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SDO Mission Management

Wanda Harding

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

SDO
2008/12/01 (NET)
GTO
Atlas V
Commercial PPF
3200 Kg
SLC 41

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jan Feb Mar

G	G	G
Y	Y	Y
G	G	G
G	G	G
G	G	G
G	G	G
G	Y	G

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

GSFC
Living With a Star
Liz Citrin
Kevin Hughes
Wanda Harding
Eric Poole
Dianna Lampert
Benjamin Studenski
Bob Henry
Robert McEntire
Marty Loughheed



Jan Feb Mar

ICD

G	G	G
---	---	---

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
Y	Y	Y
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

SIGNED SCNS:		SCNS IN REVIEW	
SCN #	DATE SIGNED	SCN #	DATE SIGNED
SDO Atlas V ICD (Rev -)	05/08/2007	002 (3.3.5, EMC)	
001 (3.4 Flt Design)	08/09/2007	003 (Elec Interfac es)	
004 (3.3.1.1 SC Therma l)	08/09/2007	005 (Table 4-1 Ver Matrix)	

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006 (Appendix B: EICD)	
007 (3.1.2.3 Strength)	
008 (3.3.2.6 SC GN2 Purge)	
009 3.1.3 (Mass Props)	
010 3.3.5.2. 4 (Launch Site RF Environ)	

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John F. Kennedy Space Center

SDO - Engineering

Eric Poole

LAUNCH SERVICES PROGRAM

Launch Vehicle

Payload Fairing

First Stage

Second Stage

Third Stage

Payload Attach Fitting

Other

Mission Specific

Certification

Mission Analysis

ERS/ERB

Launch PAD/GSE

Mission Unique IV&V

Jan	Feb	Mar
Y	G	G
G	G	G
G	G	G
Y	G	G
N/A	N/A	N/A
G	G	G
G	G	G
G	G	G
N/A	N/A	N/A
Y	G	G
G	G	G
G	Y	Y
N/A	N/A	N/A

REQUIREMENT VERIFICATION STATUS

NUMBER OF REQUIREMENTS 0

VERIFIED TO DATE 0

LAUNCH PAD / GSE MODS (IF APPLICABLE)

Drag on cooling required. TBD cart capabilities (cleanliness, pwr, elec, cooling)

MISSION UNIQUE STUDIES (IF APPLICABLE)

There are none.

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John F. Kennedy Space Center

SDO - Mission ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	ERS-06-182	SDO - First use of D1666 Payload Separation System on Atlas V	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	ERS-06-335	SDO Solar Array Deployment Immediately at Separation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	ERS-06-378	Solar Dynamics Observatory (SDO) ICD Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-363	Atlas V Lightning Suppression Assemblies for Payload	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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John F. Kennedy Space Center

SDO - Vehicle ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	ERS-05-345	Centaur Large Helium Bottle (LHB) COPV	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	ERS-05-196	Atlas V - Thermal Assessment and Redesign of Single Pneumatics Panel [long coast]	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	ERS-06-305	Atlas V - Booster RP Tank / Atlas V RP Tank Long Term Redesign	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-204	AV009 Centaur Performance Evaluation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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John F. Kennedy Space Center

SDO - Launch Site

Dianna Lampert

LAUNCH SERVICES PROGRAM

LSSP

Jan Feb Mar

G	G	G
---	---	---

LSSP	Planned	Released
Preliminary	03/27/2007	4/2007
Baseline	04/30/2008	

CUSTOMER INPUTS

Jan Feb Mar

G	G	G
---	---	---

DELIVERABLES

Jan Feb Mar

Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	G	G	G
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Jan Feb Mar

G	G	G
---	---	---

PPF

Astrotech

10K Clean Room

G	G	G
G	G	G
G	G	G

Spacecraft OPS

G	G	G
---	---	---

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John F. Kennedy Space Center

SDO Budget Breakdown

Benjamin Studenski

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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John F. Kennedy Space Center

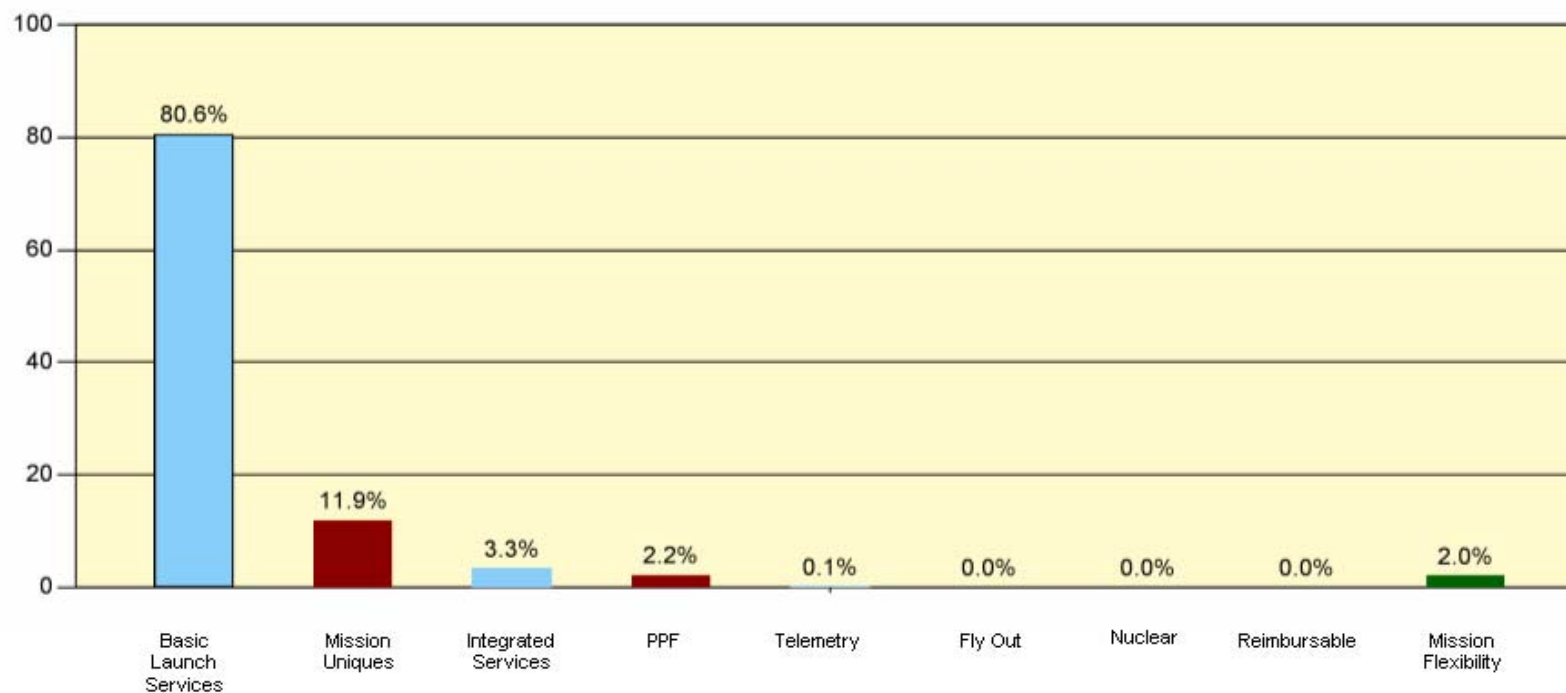
Launch Services Budget Breakdown

SDO Mission

Benjamin Studenski

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



- No flexibility; cost are fixed
- Limited Flexibility depending on spacecraft requirements
- Flexible portion of budget

Notes:

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John F. Kennedy Space Center

SDO - Business

Benjamin Studenski

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
G	G	G
G	G	G

Milestone	Date
Milestone 1A	09/29/04
Milestone 1B	03/15/05
Milestone 1C	11/15/05
Milestone #2	05/01/06
Milestone #3	08/01/06
Milestone #4	11/01/06
Milestone #5	02/01/07
Milestone #6	05/01/07
Milestone #7	08/01/07
Milestone #7A	11/14/2007
Milestone #8	11/14/2007
Milestone: #9	6/1/2008
Milestone: #10	9/1/2008
Milestone #11	12/1/2008

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

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Contract Status				
Launch Services				
Contract Mod	Number	Description		
	067	Change SDO Launch date to NET 8/1/2008		
	999	Change SDO Launch Date to 12/1/2008		
There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	028	Coupled Load Analysis (CLA) Report	09/14/2004	10/28/2004
	066	SDO Trajectory Optimization	10/06/06	11/17/2006
	999	Separation Attitude Study	02/29/08	
Contract Mod (PPF)	Number	Description		
	NNK06LB20B	ATP Commercial Payload Processing Task Order		
There are no Other Contract Mods				
There are no Issues.				

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John F. Kennedy Space
Center

SDO - Safety and Mission Assurance

Bob Henry

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	Jan	Feb	Mar
	Complete	In Work				
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	RP-1 Tank Qual - Indications are that a fully qualified tank (suitable for 551) will be flown for SDO, therefore Quality rates this yellow pending satisfactory results. Results are expected by the end of March 2008.	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Activity	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Activity	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Activity	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Activity	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Reliability data gathering in work	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	EWR 127-1 Tailoring In Work	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No activity	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No activity	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No activity	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None identified to date	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Deliver by SARR	G	G	G
Mission Assurance				G	G	G
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No activity	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No activity	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No activity	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No activity	G	G	G
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G

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John F. Kennedy Space Center

SDO Comm & Telemetry

Robert McEntire and Marty Loughheed

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jan	Feb	Mar
G	G	G
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

Jan	Feb	Mar
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Sensitive But Unclassified



John F. Kennedy Space Center

GLAST Project Summary

LAUNCH SERVICES PROGRAM

Mission	GLAST
Launch Date	2008/02/05
Launch Vehicle	Delta II
Launch Period Window	Day to Day 45 min of sunlight after S/C separation
PPF	ASO-KSC

OVERALL MISSION

Jan	Feb	Mar
Y	Y	Y

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

Jan	Feb	Mar
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

Jan	Feb	Mar
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

Jan	Feb	Mar
Y	Y	Y
G	G	G
Y	Y	Y
G	G	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

Y	R	Y
G	Y	Y
N/A	0	N/A
Y	R	Y
Y	R	Y
G	G	G
G	G	G

COMM & TELEMETRY

Communications
Telemetry

G	G	G
0	0	0

BUSINESS

Budget
Contracts

G	G	G
G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

0	0	0
0	0	0
0	0	0

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GLAST - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

		Condition
RYG Trend	RiskID	Consequence
R	M0236	GLAST Type 1 Analysis DCR delayed to L-4 months (initially). DCR held on 3/4/08. Strength analysis pending. Current launch date 5/16/08.
		Minimal schedule time to mitigate any issues should they be found.
Y	M0245	There is a short turnaround time between the DAWN DIIH post flight data review and the GLAST DIIH PreVOS.
		Open technical issues or incomplete post flight data review, impacting launch readiness and major review schedules.
O	V0032 (A)	The first 3 flights of the Delta 792X Heavy Vehicle resulted in unexpected behavior during transonic flight.
		Delay in launch date due to incomplete anomaly investigation.
O	V0046	ULA does not perform an inspection for microscopic cracks before providing a spacecraft customer with a TPAF.
		Propagation of a micro crack in the TPAF during shock or vibe testing could cause damage to the spacecraft.
O	V0047	Failure analysis of a PacSci detonator that failed service life extension testing uncovered a vulnerability in which detonators could be reworked and inadvertently returned to production without the correct load.
		Failure to initiate FTS destruct ordnance chain on command.

P
R
C
B

C
F

C
C
C
U
R
R
E
N
C
E

5
91-100%
4
51-90%
3
11-50%
2
6-10%
1
1-5%



1 2 3 4 5

IMPACT

Sensitive But Unclassified

0	V0050	DAWN experienced a significant delay very late in the hardware production process that delayed the launch readiness date. The same contributing causes exist for other NASA missions.
		Possible delay of other NASA missions.
0	V0015 (A)	Nine flight critical engine section components are unqualified for the newly revised P95/50 MEFL MECO transient environment.
		Loss of mission (worst case).
0	V0033 (A)	Cracks have occurred and been detected within Electronics-Package Thick Film Assemblies.
		Undetected cracks in other E-Packages causing failure.
0	V0034 (A)	Delaminations have occurred within the Graphite Epoxy Motor (GEM) nozzles' Exit Cone Liners (ECL) and Throat Support Insulators (TSI).
		Detrimental hot gas flow, adverse heating and eventual failure of the nozzle.
0	V0035 (A)	A photodiode failed within RIFCA S/N 20093.
		Failure of photodiode in flight causing loss of one lane in RIFCA.
0	V0053 (A)	All solid-nickel cased discrete semiconductors (transistors and diodes in a TO-XX can) are suspect to have conductive nickel flakes as a consequence of the forming process used to manufacture the cans.
		Loss of mission.
0	V0052	LS SMA has noted human error and process issues that indicate that Boeing's Quality Management System Corrective Actions are not preventing re-occurrence.
		The re-occurrence of undetected human errors and process problems can lead to major damage or loss of flight hardware or GSE.
0	P0018	Traditional DMCO testing on DII vehicles will be eliminated.
		Elimination of DMCO testing will not allow for capturing hardware failures off-pad, and thus introduce potential for on pad schedule delays.

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0	P0019	USAF must fly out 5 Delta II GPS by end of FY 2008.
		Possible shifts in NASA FPB manifest dates for missions affected.

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GLAST - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	Y	First DII 7920H-10C ER, Type 1 analysis required - DCR slipped to 3/4/08 due to inclusion of DAWN SI review and autopilot design. Current launch date is 5/16/08	ERS-05-286 (M0236)	8/8/2005	03/21/2008
Engineering	G	S/C power on at launch - T-0 battery cooling to be implemented. Testing done to quantify leakage at miniskirt interface completed. No leakage encountered, detailed installation procedures to be implemented.	ERS-06-124	4/17/2006	05/01/2008
Engineering	G	2nd Stage Tank Leaks - Themis	ERS-06-284	08/04/2006	3/14/2008
Engineering	G	MECO Assessment-Plan reviewed and accepted by LSP - awaiting S/C testing results	ERS-05-137	4/19/05	3/20/2008
Engineering	G	Dawn Heavy post flight review will be conducted within weeks of GLAST launch.	M0245	11/27/06	3/20/2008
Engineering	G	The first 3 flights of the Delta 792X Heavy Vehicle resulted in unexpected behavior during transonic flight.	V0032	03/13/2007	3/20/2008
Engineering	G	Failure analysis of a PacSci detonator that failed service life extension testing uncovered a vulnerability in which detonators could be reworked and inadvertently returned to production without the correct load.	V0047	03/13/2007	3/20/2008
Engineering	G	DAWN experienced a launch delay due to late shipment of hardware from Decatur. GLAST S2 Decatur ship date is currently end of November 07 for a launch date of 05/29/08.	V0050	04/18/2007	01/31/2008
Engineering	G	LS SMA has noted human error and process issues that indicate that Boeing's Quality Management System Corrective Actions are not preventing re-occurrence.	V0052	05/23/2007	08/15/2008
Engineering	Y	First stage engine skin thickness may have negative margins of safety if loads increase due to aero model update.	ERS-07-263	01/15/2008	3/19/2008

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Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	G	DAWN Transonic Flight Reconstruction and Model Verification	ERS-08-05	01/15/2008	03/21/2008
Engineering	Y	RF & LDS installation may not be completed in time for GLAST. Key contractor personnel needed for system implementation.	ERS-08-24	02/04/2008	04/01/2008
Engineering	G	Tyco relay issues with P&C boxes.	ERS-07-40	02/15/2008	03/17/2008
Engineering	Y	NASA has issued a no fly of GG TLX. ULA to request use det blocks. ULA has submitted waiver to Range for use of det blocks.	ERS-07-308	02/15/2008	03/20/2008
Engineering	G	LSP muxes needed for mission are in use by STSS Demo for their integrated testing. KSC needs Muxes by 2/29/08 and must be shipped no later than 2/15/08.	WI	02/15/2008	02/29/2008
Engineering	G	Separation Switch envelope violation	WI	02/15/2008	03/28/2008
Engineering	Y	COSMO-2 1st Stage Engine Mixture Ratio Observation. May require increase in inclination to compensate for unknown root cause of fuel mix ratio issue.	ERB-07-366	12/13/07	03/18/2008
Engineering	G	SLC-17B Crane Rope Issue	ERS-08-50	3/4/08	3/24/08

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GLAST - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
ATP	9/12/05
PSWG/GOWG	10/17/05-10/19/05
GOWG #3	4/18/06
MIWG #5	4/19/06
ICD Baseline	5/5/06
MIWG #6	9/20/06
TFA	02/21/2006
PMA	10/06/2006
GOWG #4	04/04/2007
ICD Revision "A" Release	05/02/2007
Spacecraft Fitchcheck	09/25/2007
T-0 Battery Cooling ERB	04/12/2007
ICD ERB	04/13/2007
Pre-Environmental Review	04/11/2007-04/12/2007
DTO Trajectory Analysis	04/02/2007-07/25/2007
MIWG #7	04/19/2007
MIWG #8 at Denver	08/15/2007
Spacecraft Shock Test	10/03/2007-10/05/2007
Spacecraft Sine Vibe/Acoustic	09/17/2007-10/01/2007
GOWG #5	10/23/2007-10/24/2007
Spacecraft Pre-Ship Review (To NRL Facility)	11/13/2007-11/14/2007
GOR	02/05/2008

Planned	
Type I DCR	03/04/2008
MAR	03/04/2008
Spacecraft Pre-Ship Review (NRL to ASO)	02/29/2008
Spacecraft ship to ASO	03/04/2008
Vehicle On Stand	03/24/2008
Pre-VOS	03/20/2008
ICD Rev B release	02/29/2008
Launch Vehicle Readiness Review	04/04/2008

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GLAST Mission Management

Bruce Reid

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD



ICD

GLAST
2008/02/05
565 km Circ 28.5 deg
Delta II
Day to Day 45 min of sunlight after S/C separation
ASO-KSC
NTE 4627
SLC-17 B

Jan Feb Mar

G	G	G
---	---	---

SIGNED SCNS:		SCNS IN REVIEW	
SCN #	DATE SIGNED	SCN #	DATE SIGNED
3d1	10/31/2006	19d3	
7d2	01/04/2007	26d2	
8d1	09/29/2006	31d4	
9d1	10/31/2006	32d1	
10d1	10/31/2006		
1d4	03/02/2007		
4d3	02/15/2007		

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jan Feb Mar

G	G	G
G	Y	Y
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	G
0	0	0
0	0	0
0	0	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

GSFC

SEU

K. Grady

M. Goeser

Bruce Reid

Diana Calero

Tom Rucci

Benjamin Studenski

Bob Henry

Marty Loughheed

Nathan Wood

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2d3	01/04/2007
13d1	02/15/2007
14d3	03/02/2007
15d2	03/02/2007
12d4	03/27/2007
5d1	04/19/2007
16d5	01/26/2008
20d1	06/22/2007
17d5	06/11/2007
18d1	07/19/2007
11d3	01/08/2008
22d1	08/13/2007
21d1	09/11/2007
23d2	12/19/2007
24d5	02/05/2008
25d1	09/11/2007
27d3	02/07/2008
28d1	11/01/2007
29d2	02/14/2008
30d1	02/11/2008

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GLAST - Engineering

Diana Calero

LAUNCH SERVICES PROGRAM

Launch Vehicle

Payload Fairing

First Stage

Second Stage

Third Stage

Payload Attach Fitting

Other

Mission Specific

Certification

Mission Analysis

ERS/ERB

Launch PAD/GSE

Mission Unique IV&V

Jan	Feb	Mar
Y	R	Y
G	G	G
G	Y	Y
G	G	G
N/A	N/A	N/A
G	G	G
G	G	G
G	Y	Y
N/A	0	N/A
Y	R	Y
Y	R	Y
G	G	G
G	G	G

REQUIREMENT VERIFICATION STATUS

NUMBER OF REQUIREMENTS	89
VERIFIED TO DATE	6

LAUNCH PAD / GSE MODS (IF APPLICABLE)

Directed battery cooling design/modifications

MISSION UNIQUE STUDIES (IF APPLICABLE)

There are none.

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GLAST - Mission ERB Status

Diana Calero

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	05-137	GLAST MECO Assessment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Y	05-286	Delta 7920H-10C ER Type 1 Analysis	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	06-086	GLAST Mission ICD Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	06-124	GLAST T-0 Battery AC System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-54	GLAST Special Instrumentation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	04-152	STSS/PACS Prelaunch Cooling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-122	GLAST Hardware Reviews	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-353	GLAST PAF Fitchcheck Violation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Y	08-24	RF & Lightning Detection System (RFDS-LDS)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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GLAST - Vehicle ERB Status

Diana Calero

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	04-474	792X Transonic Observation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	05-378	Delta II, RS-27 Engine -51 Hoop/Band Separation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G	06-284	Delta II 2nd Stage Tanks	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-53	DMCO On-Pad Initiative	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-194	Loose Backshell Adapter Saddle Clamps on Delta II Wire Harness	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G	07-278	High MECO shock on Phoenix Launch	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Y	07-263	Delta II Heavy Aerodynamic Drag Database Update	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	08-05	DAWN Transonic Flight Reconstruction and Model Verification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Y	07-366	COSMO-2 1st Stage Engine Mixture Ratio Observation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-40	Goodrich Analysis of Leach and Tyco Relay Failures	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Y	07-308	Delta II GG TLX Output Failure	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	ERS-08-50	SLC-17B Crane Rope Issue	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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GLAST - Launch Site

Tom Rucci

LAUNCH SERVICES PROGRAM

LSSP

Jan Feb Mar

G	G	G
---	---	---

LSSP	Planned	Released
Preliminary	08/01/2006	09/29/2006
Baseline	04/12/2007	08/27/2007

CUSTOMER INPUTS

Jan Feb Mar

G	G	G
---	---	---

DELIVERABLES

Jan Feb Mar

Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	N/A	N/A	N/A
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Control of S-Band @ 2086-2126 MHz and GPS 1555-1595 MHz to 1 volt /meter

TDRS Trailer Staging @ ASO

Jan Feb Mar

G	G	G
G	G	G
G	G	G

PPF

Astrotech - Commercial IDIQ

G	G	G
G	G	G

Spacecraft OPS

AE Office Space - for pad Ops

G	G	G
G	G	G

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GLAST Budget Breakdown

Benjamin Studenski

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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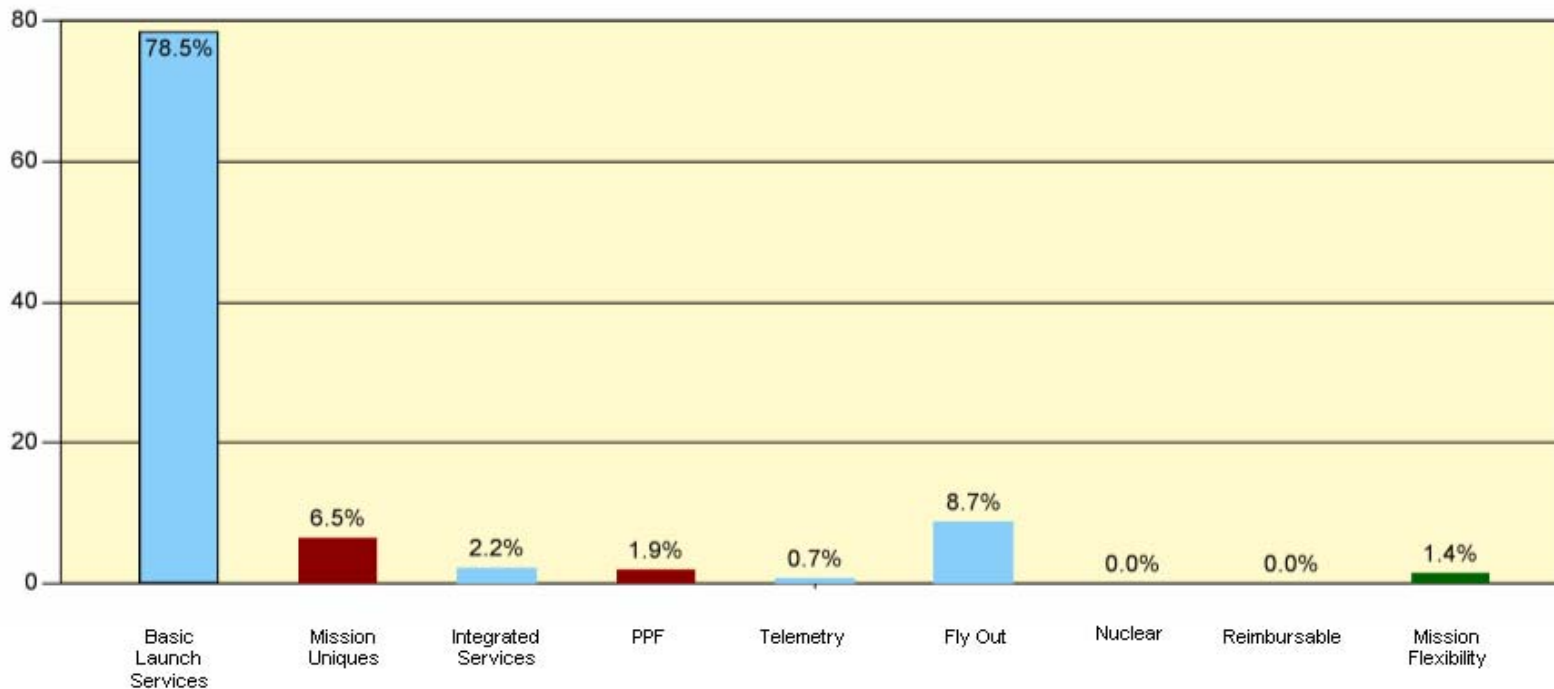
Launch Services Budget Breakdown

GLAST Mission

Benjamin Studenski

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



- No flexibility; cost are fixed
- Limited Flexibility depending on spacecraft requirements
- Flexible portion of budget

Notes:

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GLAST - Business

Benjamin Studenski

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
G	G	G
G	G	G

Milestone	Date
Milestone #1	Sep 7 2005
Milestone #2	Dec 7 2005
Milestone #3	Mar 7 2006
Milestone #4	Jul 7 2006
Milestone #5	Sep 7 2006
Milestone #6	Dec 7 2006
Milestone #7	June 14 2007
Milestone #8	Nov 05 2007
Milestone #9	May 16 2008

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status		
Launch Services		
Contract Mod	Number	Description
	59	NSS 20.3.4 Final Design Load Cycle FDLS
	73	NSS 20.2 additional MIWG
	111	NSS 20.3.4 Second Final Design Load Cycle FDLC
	119	NSS 20.2 Support for MIWG
	181	NSS 20.2 Early MIWG held 08/02/05
	184	NSS 26.1 Cat 1 Core Vehicle Analysis
	190	ATP GLAST Mission
	228	NSS 20.3.2 Preliminary Trajectory Analysis
	190	NSS 11.2 Enhanced fairing internal cleaning
	190	NSS 20.1 Pedigree review

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Contract Mod	Number	Description		
	190	NSS 30.2.4 Additional support for final design load cycle		
	190	NSS 9.1.1 Two 61 pin connectors		
	190	NSS 11.1 Enhanced fairing environment		
	287	NSS 35.1 Additional Console Notebooks (CCR NLS-B 241), L-6		
	024	ATP Commercial Payload Processing		
	311	NSS 36.1 Telemetry Acquisition Assistance Messages		
Contract Mod (LD)	Number	Description		
	244	Delay from 9/7/2007 to 10/7/2007		
	119	Delay from 9/30/06 to NET 2/28/07		
	155	Delay from 2/28/07 to NET 5/28/07		
	171	Delay from 5/28/07 to 9/7/07		
	279	Delay from 10/7/2007 to 12/14/2007		
	289	Delay from 12/14/2007 to NET 1/31/2008		
	301	Delay from NET 1/31/2008 to 2/5/2008		
	309	Delay from 2/5/2008 to 5/16/2008		
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-057	Rerun CLA	06/30/2003	10/16/2003
	NLSB-074	Second re-run coupled load analysis	09/30/2003	06/01/2004
	NLSB-091	CG Lateral Load limit vs. Mass analysis	01/31/2004	04/07/2004
	NLSB-096	61 Pin Connector	06/30/2004	12/10/2004
	NLSB-126	Distributed Aerodynamics Coefficient	07/27/2004	12/10/2004
	NLSB-137	TPAF Shipment & Inspection	12/06/2004	01/07/2005
	NLSB-149	TPAF Inspection at GD/SASS	01/20/2005	03/08/2005
	NLSB-185R2	Gas Budget Analysis	05/19/2006	06/26/2006
	NLSB-188R1	TPAF mod to incorp switch pad	06/19/2006	08/21/2006
	NLSB-204	2nd Stage AC Ducting (GSE shared with STSS)	08/01/2006	03/03/2008
	NLSB-206	PAF Cleaning	10/01/2007	
	NLSB-214	2nd Stage AC Ducting	09/2/2007	01/08/2008
	NLSB-236	Battery Cooling proposal Prep	12/01/2005	9/18/2006

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Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-240	EMC/EMI Analysis	11/30/2006	01/19/2007
	NLSB-268	GLAST Special Instrumentation (no cost to GLAST mission budget)	03/07/2008	03/07/2008
	NLSB-269	Drill Template Shipment (no cost)		
	NLSB-271	Special Instrumentation 6915 PAF (no cost to GLAST mission budget)		
	NLSB-275	Fairing Extension Cable Modification	09/14/2007	01/08/2008
	NLSB-295	Secondary Latch Clips	08/11/2007	01/08/2008
	NLSB-296	TPAF Inspection	7/06/2007	01/08/2008
	NLSB-300	RS-27 Engine Pedigree Review	12/31/2007	03/10/2008
	NLSB-302	Additional ITA Effort	10/22/2007	01/08/2008
	NLSB-305R3	Lightning Detection System/RF Detection System	04/16/2008	
	NLSB-306	Proposal Prep for cancelled Flight Force Modeling Analysis (no cost to GLAST mission budget)		
	NLSB-311	GLAST DTO Update	03/31/08	
	NLSB-XXX	Launch Vehicle Collision Avoidance Analysis Support	4/25/2008	
Contract Mod (PPF)	Number	Description		
	024	ATP Payload Processing Task Order		
Contract Mod (Other)	Number	Description		
	057	NSS 30.1 Flyout Costs		
	085	NSS 30.1 Flyout Costs		
	198	Flyout Costs		
	240	Flyout Costs		
There are no Issues.				

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John F. Kennedy Space
Center

GLAST - Safety and Mission Assurance

Bob Henry

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	Jan	Feb	Mar
	Complete	In Work				
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Continuing to monitor ULA-Boeing's response to Quality Management System risk.	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No GIDEPs at this time	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues at this time	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input checked="" type="checkbox"/>	<input type="checkbox"/>	We have completed reliability analyses to generated the required reliability inputs for the up coming Safety and Mission Assurance Directorate Readiness Review.	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues	G	G	G
Safety				G	G	G
Requirements Definitions	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Tailoring complete	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Under Review NASA/AF	G	G	G
Licenses/Use Authorizations	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Use Authorizations approved	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Final MSPSP in review	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	None identified to date	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MPCP in work	G	G	G
Mission Assurance				Y	Y	Y
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Alenia 2nd-Stage Oxidizer Leak, tank assessment for GLAST is in-work; ULA transition.	Y	Y	Y
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No Issues	G	G	G

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John F. Kennedy Space Center

GLAST Comm & Telemetry

Marty Loughheed and Nathan Wood

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jan Feb Mar

G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

Jan Feb Mar

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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NOAA-N' (Prime) Project Summary

LAUNCH SERVICES PROGRAM

Mission	NOAA-N' (Prime)
Launch Date	2009/02/01
Launch Vehicle	Delta II
Launch Period Window	TBD
PPF	1610

OVERALL MISSION

Jan	Feb	Mar
G	G	0

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

Jan	Feb	Mar
G	G	0
G	G	0
G	G	0
G	G	0
G	G	0

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

Jan	Feb	Mar
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

Jan	Feb	Mar
Y	Y	Y
G	G	G
Y	Y	Y
G	G	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

G	G	Y
G	G	G
N/A	N/A	N/A
G	G	G
G	G	G
G	G	G
N/A	N/A	N/A

COMM & TELEMETRY

Communications
Telemetry

0	0	0
0	0	0

BUSINESS

Budget
Contracts

G	G	G
G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

G	G	0
0	0	0
0	0	0

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NOAA-N' (Prime) - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

		Condition
RYG Trend	RiskID	Consequence
0	P019	USAF must fly out 4 Delta II GPS by the end of the FY 2008 to avoid USAF Program impacts.
		NASA FPB Manifest dates may be required to move to provide GPS priority.
0	V050	Dawn experienced a significant delay very late in the hardware production process that delayed the launch readiness date. The same contributing causes exist for other NASA missions. In addition, ULA just in time delivery approach provides little margin to hardware need dates.
		Late production of LV hardware causes a slip in the launch date.
0	P018	Traditional DMCO Testing (Bldg AO on CCAFS) on Commercial and NASA Delta II launch vehicles will be eliminated. Required testing that has historically been performed in DMCO will be transferred to the launch pad as part of the DMCO On-Pad Initiative.
		Elimination of traditional DMCO Testing will not allow for capturing hardware failures off-pad and thus introduce potential for on-pad schedule delays of more than one key milestone if hardware fails during pad testing.
0	P008	The current NLS statement of work for SLC-2 places approval authority for all changes to pad maintenance in the Contractor's hands, and specifically excludes NASA approval.
		Reduced maintenance levels may results in equipment failure that forces NASA to fund unplanned repairs or replacements.

P
R
C
B

C
F

C
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C
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R
R
E
N
C
E

5
91-100%
4
51-90%
3
11-50%
2
6-10%
1
1-5%



1 2 3 4 5

IMPACT

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NOAA-N' (Prime) - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/Problem	Open Date	Due Date
Engineering	Y	2nd stage tank must be cleared for potential to leak. Near term tanks will be inspected per THEMIS procedure. WI held open until long term inspection procedure is established.	ERS-06-284	11 Jul 06	16 May 08
Mission Management	G	EEB modification plan to meet customer requirements has been submitted by ULA and evaluated by Engineering Selection and implementation plan in-work	WI	09/11/2007	11/30/2007
Mission Management	G	NOAA-N Prime manifested for 2009. No range conflict at this time.	P019		
Mission Management	G	NOAA-N Prime launch vehicle is being built well ahead of the need date and stored. There exists plenty of margin in the schedule.	V050		
Mission Management	G	Several missions will use on pad DMCO before NOAA-N Prime. Problems with the new method of testing should be identified before this mission enters the launch campaign.	P018		

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NOAA-N' (Prime) - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
Final Payload Compatibility Drawing released	15 June 06
Draft Preliminary LSSP distributed	2 March 06
PAF to GS fitcheck at Decatur	12 July 06-13 July 06
RF Hazard Analysis	22 May 06
ICD Released	21 June 06
ARAR Initial Release	28 Feb 07
MIWG #5 / GOWG #2 at SLC-2 B1628	20 mar 07-20 Mar 07
Launch moved to Feb 1, 2009	31 Jan 07
Preliminary LSSP Release	2 March 06-21 Dec 07
Launch Base Integrated Ops Team TIM	week of 6/25-26 June 06
PAF to GS fitcheck 2 at Decatur	29 Aug 07-31 Aug 07
ARAR Final Release	28 Sept 07-18 Oct 07
Launch Base Integrated Ops Team Meeting	Dec 07-10 Jan 08
VLC complete	18 Dec 07
SC officially in storage.	5 Mar 08

Planned	
Payload to Blockhouse Wiring Diagram	21 Nov 07-28 Mar 08
GOWG at VAFB	12-13 Mar 08

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NOAA-N' (Prime) Mission Management

Dave Breedlove

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD



ICD

NOAA-N' (Prime)
2009/02/01
Alt./7237 km / Incl- 98.73 deg
Delta II
TBD
1610
(SC + PAF)
SLC-2

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jan Feb Mar

G	G	0
G	G	0
G	G	G
G	G	0
G	G	0
G	G	0
G	G	0

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	0
G	G	0
G	G	0
G	G	0
0	0	0
0	0	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

GSFC
NOAA - POES
Wayne McIntyre
Jerry Nagy
Dave Breedlove
Eric Poole
Tricia Fertig
Walner Thervil
Ken Hale
Ralph Mikulas
Mike Patton

Jan Feb Mar

G	G	0
---	---	---

SIGNED SCNS:		SCNS IN REVIEW	
SCN #	DATE SIGNED	SCN #	DATE SIGNED
001	09/29/2006	006	
002	09/29/2006	007	in review
003	09/29/2006		
004	09/29/2006		
005	09/29/2006		
008	08/06/2007		
009	08/08/2007		

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NOAA-N' (Prime) - Engineering

Eric Poole

LAUNCH SERVICES PROGRAM

Launch Vehicle

Payload Fairing

First Stage

Second Stage

Third Stage

Payload Attach Fitting

Other

Mission Specific

Certification

Mission Analysis

ERS/ERB

Launch PAD/GSE

Mission Unique IV&V

Jan	Feb	Mar
G	G	Y
G	G	G
G	G	G
Y	Y	Y
N/A	N/A	N/A
G	G	G
G	G	G
G	G	G
N/A	N/A	N/A
G	G	G
G	G	G
G	G	G
N/A	N/A	N/A

REQUIREMENT VERIFICATION STATUS

NUMBER OF REQUIREMENTS 132

VERIFIED TO DATE 0

LAUNCH PAD / GSE MODS (IF APPLICABLE)

There are none.

MISSION UNIQUE STUDIES (IF APPLICABLE)

There are none.

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NOAA-N' (Prime) - Mission ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

			ERB Req?		Board Held?			Closure		
R/Y/G	ERS #	TITLE	Y	N	Y	N	N/A	AI	ENG.	OCE
G	06-046	NOAA-N' ICD review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
G	07-177	NOAA-N Prime Dual Inhibits Waiver	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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NOAA-N' (Prime) - Vehicle ERB Status

Eric Poole

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	05-378	RS-27 Engine-51 Hoop/Band Separation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Y	06-284	2nd Stage Tank Leak Anomaly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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NOAA-N' (Prime) - Launch Site

Tricia Fertig

LAUNCH SERVICES PROGRAM

LSSP

Jan Feb Mar

G	G	G
---	---	---

LSSP	Planned	Released
Preliminary	12/1/2007	12/21/07
Baseline	7/1/2008	

CUSTOMER INPUTS

Jan Feb Mar

G	G	G
---	---	---

DELIVERABLES

Jan Feb Mar

Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	G	G	G
Radiation Control	G	G	G
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

Jan Feb Mar

LAUNCH SITE UNIQUE

GN2 Passive Cooling at SLC-2

G	G	G
G	G	G

PPF

G	G	G
---	---	---

Spacecraft OPS

G	G	G
---	---	---

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NOAA-N' (Prime) Budget Breakdown

Walner Thervil

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

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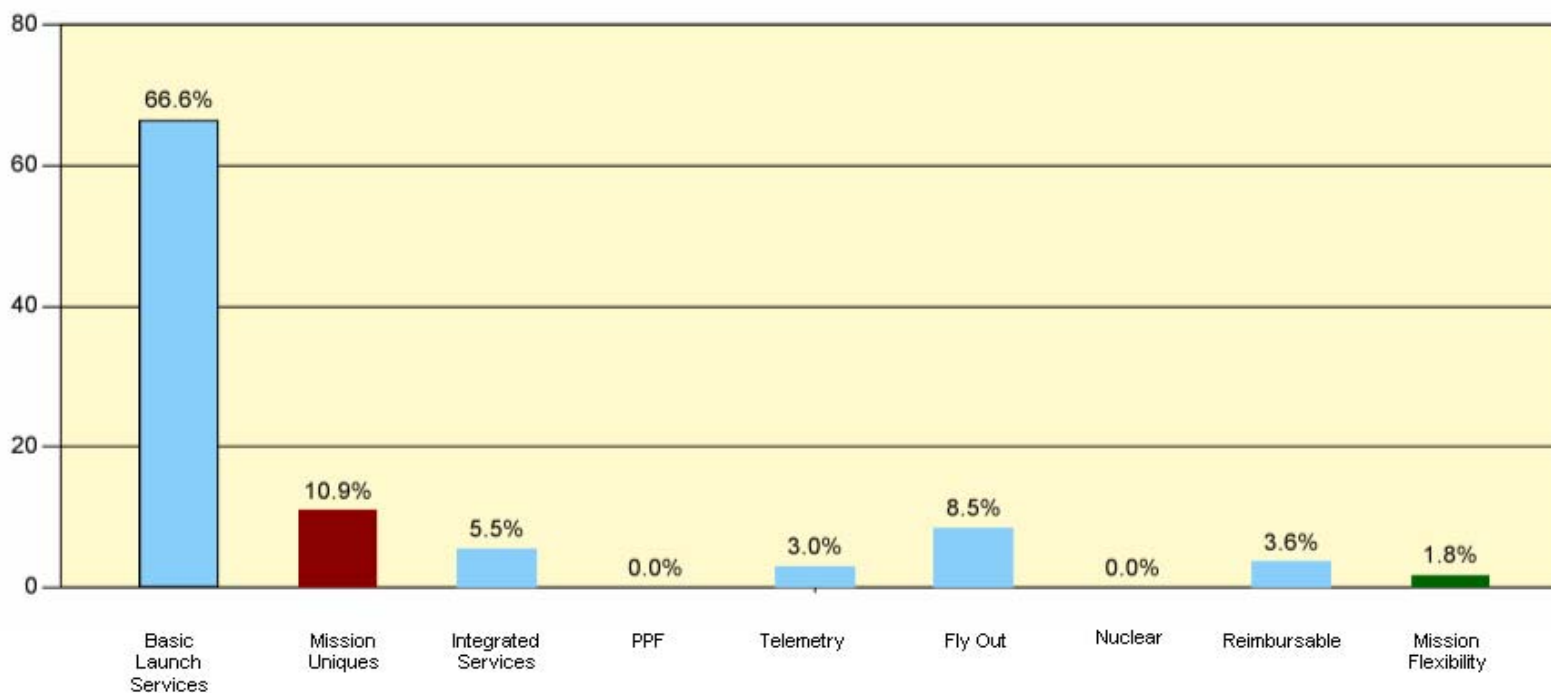
Launch Services Budget Breakdown

NOAA-N' (Prime) Mission

Walner Thervil

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



- No flexibility; cost are fixed
- Limited Flexibility depending on spacecraft requirements
- Flexible portion of budget

Notes:

Variance: The mission flexibility increases by 3.5% from the previous quarter report. Launch Vehicle will be in storage for only 3 months therefore the storage reduced considerably. The revised MCRD reflected a 7/1/2008 starting date for storage.

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NOAA-N' (Prime) - Business

Walner Thervil

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
G	G	G
G	G	G

Milestone	Date
Milestone 1	6/30/2003
Milestone 2	4/30/2004
Milestone 3	5/1/2006
Milestone 4	8/1/2005
Milestone 5	11/1/2005
Milestone 6	3/1/2006
Milestone 7	7/1/2006
Milestone 8	12/1/2007
Milestone 9	2/1/09

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status		
Launch Services		
Contract Mod	Number	Description
	72	Mission ATP w/ NSS 27.1 Western Range Launch & MUS 9.1 One-time Multi Trajectory/Multi Azimuth Scope Reduction
	80	Customized payment schedule
	258	Request NSS 25.2.1 Monthly Storage and NSS 25.2.2 (CY08 and CY09) per Vehicle Charge.
	157	Add launch readiness date of October 31, 2006 and request storage prices
	309	NSS 35.2 Additional 40 Mission Console Notebooks for VAFB Launches
	322	Change NOAA-N' Mission Call Readiness Date (MCRD) from December 1, 2007 to July 1, 2008.
Contract Mod (LD)	Number	Description
	82	Launch Delay from 06/03/2005 to 10/30/2005
	93	Launch Delay from 10/30/2005 to 01/30/2006

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Contract Mod (LD)	Number	Description		
	117	Launch Delay from 01/30/2006 to NET 12/2007		
	274	Launch Delay from NET 12/2007 to 02/1/2009		
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	ML-029	Compat with Delta II Review - NOAA-N'	1/02/1997	2/03/1997
	NLSB-232 R3	Access platform concept study	4/30/2007	7/10/2007
	NLSB-238 R1	Explosion-proof telephone at SLC-2	11/15/2006	11/20/2006
	NLSB-252 R2	EEB Temperature Control Concept Study	7/01/2007	1/08/2008
	NLSB-267	Vehicle Modification for Payload fairing Re-Radiation System	1/01/2009	
	NLSB-320	SLC-2 Level 5 and Level 6 Access Platform Build and Install	11/16/2008	
There are no PPF Contract Mods				
There are no Other Contract Mods				
There are no Issues.				

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Center

NOAA-N' (Prime) - Safety and Mission Assurance

Ken Hale

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	Jan	Feb	Mar
	Complete	In Work				
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Continuing to monitor ULA-Boeing's response to Quality Management System risk	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked. Will pursue DCMA coverage of Pueblo operations.	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
Reliability				G	G	G
FMEA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	S/C RF inhibit reliability review is complete. SMA agrees with the GSFC assessment. Negligible impact to the overall Launch Vehicle reliability.	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	S/C RF inhibit assessment is complete. Safety agrees with ICD waiver to dual RF inhibit requirement.	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Spacecraft ARAR review complete. Will assess operations to be performed in Pueblo.	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Mission Assurance				Y	Y	Y
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tracking Alenia tank issues	Y	Y	Y
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Alenia tanks are yellow for Delta-II. Tank assigned to NOAA-N' will be evaluated along with any potential risk. Mission Assurance agrees with ICD waiver to dual RF inhibit requirement.	Y	Y	Y

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NOAA-N' (Prime) Comm & Telemetry

Ralph Mikulas and Mike Patton

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jan	Feb	Mar
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

Decommutation Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

Jan	Feb	Mar
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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NPP Project Summary

LAUNCH SERVICES PROGRAM

Mission	NPP
Launch Date	2009/09/01
Launch Vehicle	Delta II
Launch Period Window	Daily
PPF	Commercial PPF

OVERALL MISSION

Jan	Feb	Mar
G	G	G

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

Jan	Feb	Mar
Y	Y	G
G	G	G
G	G	G
G	G	G
G	G	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

Jan	Feb	Mar
Y	Y	Y
Y	Y	Y
Y	Y	Y
G	G	G
G	G	G

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

Jan	Feb	Mar
Y	Y	Y
G	G	G
Y	Y	Y
G	G	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

G	0	G
G	0	G
N/A	0	0
G	0	G
G	0	G
G	0	G
0	0	0

COMM & TELEMETRY

Communications
Telemetry

G	G	G
0	0	0

BUSINESS

Budget
Contracts

G	G	G
G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

0	0	0
0	0	0
0	0	0

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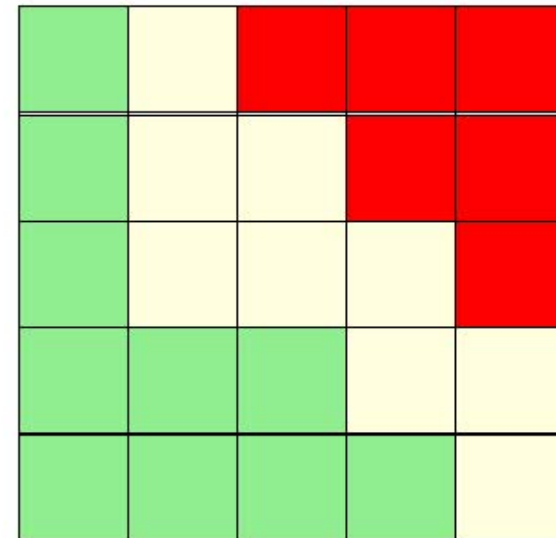
NPP - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

There are no Risks.

P
R
C
B
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C
C
C
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R
R
E
N
C
E

5
91-
100%
4
51-90%
3
11-50%
2
6-
10%
1
1-5%



1 2 3 4 5
IMPACT

Sensitive But Unclassified



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NPP - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	0	Separation switches are not clocked per the standard location; they are rotated 90 degrees.	WI		
Engineering	0	Potential VLC disconnect	WI		
Business	0	Launch has delayed to 9/1/2009 timeframe. Need to assess cost impact to include shelf life (19 pack period of perf.) last users of Delta II pads, and other issues.	WI	08/01/2006	05/30/2008

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NPP - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
Early CLA	
Preliminary IRD received, latest rev March 2005	
Kick off meeting	
Fairing Door inputs	
S/C Mission Ops Review	08/15/2005-08/17/2005
Fairing Clearance analysis and Compatibility Drawing Review comple	
Received Draft IRD	11/01/2007

Planned	
Preliminary ICD release	07/31/2008

Sensitive But Unclassified



John F. Kennedy Space Center

NPP Mission Management

Bruce Reid

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

NPP
2009/09/01
196 deg. flight azimuth
Delta II
Daily
Commercial PPF
2206 kg
Other



ICD

There are no signed SCNs

There are no SCNs in Review

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jan Feb Mar

Y	Y	G
G	G	G
G	G	G
G	G	G
Y	Y	G
Y	Y	G
Y	Y	G

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	G
0	0	0
0	0	0
0	0	0

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

GSFC

EOS-NPOESS

Ken Schwer

T.Jones / S.Antoniak

Bruce Reid

Norman Beck, Jr.

Tricia Fertig

Benjamin Studenski

Ken Hale

Ralph Mikulas

Tuan Doan

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John F. Kennedy Space Center

NPP - Engineering

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

	Jan	Feb	Mar
Launch Vehicle	G	0	G
Payload Fairing	Y	0	Y
First Stage	G	0	G
Second Stage	G	0	G
Third Stage	N/A	0	N/A
Payload Attach Fitting	G	0	G
Other	0	0	0
Mission Specific	G	0	G
Certification	N/A	0	0
Mission Analysis	G	0	G
ERS/ERB	G	0	G
Launch PAD/GSE	G	0	G
Mission Unique IV&V	0	0	0

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	0
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)
There are none.

MISSION UNIQUE STUDIES (IF APPLICABLE)
There are none.

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John F. Kennedy Space Center

NPP - Mission ERB Status

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

			ERB Req?		Board Held?			Closure		
R/Y/G	ERS #	TITLE	Y	N	Y	N	N/A	AI	ENG.	OCE
G	04-17	NPP MECO Assessment	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sensitive But Unclassified



John F. Kennedy Space Center

NPP - Vehicle ERB Status

Norman Beck, Jr.

LAUNCH SERVICES PROGRAM

There are no Vehicle ERBs for this mission.

Sensitive But Unclassified



John F. Kennedy Space Center

NPP - Launch Site

Tricia Fertig

LAUNCH SERVICES PROGRAM

	Jan	Feb	Mar
LSSP	Y	Y	Y

LSSP	Planned	Released
Preliminary	5/1/2008	
Baseline	1/1/2009	

	Jan	Feb	Mar
CUSTOMER INPUTS	Y	Y	Y

DELIVERABLES

	Jan	Feb	Mar
Security and Badging	0	0	0
Training and Personnel Cert	0	0	0
Contingency Plans	0	0	0
Safety LSIM	Y	Y	Y
Radiation Control	0	0	0
Operational Plans	0	0	0

UNIQUE REQUIREMENTS

	Jan	Feb	Mar
LAUNCH SITE UNIQUE	G	G	G

PPF	Y	Y	Y
------------	---	---	---

Spacecraft OPS	G	G	G
-----------------------	---	---	---

Sensitive But Unclassified



John F. Kennedy Space Center

NPP Budget Breakdown

Benjamin Studenski

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

* **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.

Sensitive But Unclassified



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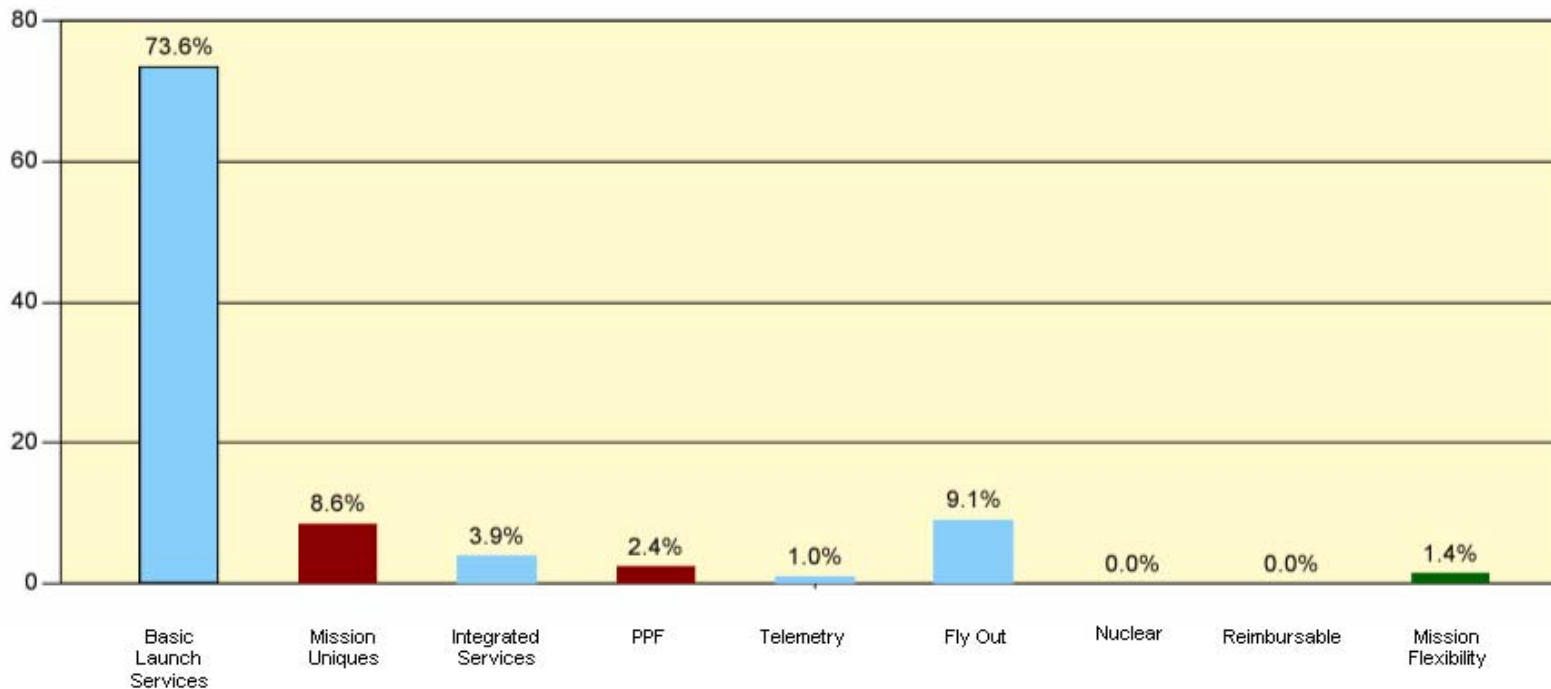
Launch Services Budget Breakdown

NPP Mission

Benjamin Studenski

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



- No flexibility; cost are fixed
- Limited Flexibility depending on spacecraft requirements
- Flexible portion of budget

Notes:

Note:

Variance: Open Equitable Adjustment claims for the delay to 4/30/2009, and for the delay to 9/1/2009.

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NPP - Business

Benjamin Studenski

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
G	G	G
G	G	G

Milestone	Date
Milestone 1	07/31/2004
Milestone 2	10/31/2004
Milestone 3	01/31/2005
Milestone 4	04/30/2005
Milestone 5	12/01/2005
Milestone 6	09/01/2008
Milestone 7	12/01/2008
Milestone 8	03/01/2008
Milestone 9	06/01/2009
Milestone: 10	09/01/2009

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Sensitive But Unclassified

Contract Status				
Launch Services				
Contract Mod	Number	Description		
	062	NSS 20.3.3: Quick Turnaround Coupled Load Analysis		
	084	NSS 9.1.1: Two 61 Pin Electric Interface from Fairing to Payload		
	162	MU (1): Remove Re-Radiating System from Mission Uniques		
	141	NSS 10.1: Remove camera NSS		
	129	CLIN 14 NPP ATP		
	287	NSS 35.2 Additional Console Notebooks		
Contract Mod (LD)	Number	Description		
	171	Delay from 10/31/06 to NET 3/1/07		
	206	Delay from 3/1/07 to 4/30/09		
	323	Delay from 4/30/2009 to 9/1/2009		
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	NLSB-121	TPAF Mods	11/26/2004	12/02/2004
	NLSTO-037R1	CLA Time Histories	10/31/2003	11/30/2003
There are no PPF Contract Mods				
Contract Mod (Other)	Number	Description		
	057	Flyout costs		
	085	Flyout costs		
	125	Flyout costs		
	198	Flyout Costs		
	Issues			
G	Equitable Adjustment amount being negotiated for launch delay to 9/1/2009			

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John F. Kennedy Space
Center

NPP - Safety and Mission Assurance

Ken Hale

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion			
	Complete	In Work		Jan	Feb	Mar
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tracking Alenia tank issues	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked	G	G	G
Mission Assurance				Y	Y	Y
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No significant issues being tracked.	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Tracking Alenia tank issues	Y	Y	Y
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Alenia tanks are yellow for Delta II. NPP tank to be assessed along with any residual risk.	Y	Y	Y

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NPP Comm & Telemetry

Ralph Mikulas and Tuan Doan

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jan	Feb	Mar
G	G	G
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Configuration
Console Checkout

Jan	Feb	Mar
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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IBEX Project Summary

LAUNCH SERVICES PROGRAM

Mission	IBEX
Launch Date	2008/07/15
Launch Vehicle	Pegasus
Launch Period Window	Determined by Arg. of Perig
PPF	1555

OVERALL MISSION

Jan	Feb	Mar
G	G	G

MISSION MANAGEMENT

	Jan	Feb	Mar
Observatory Status	G	G	G
Manifest/Range	G	G	G
Integrated Schedule	G	G	G
ICD	G	G	G
CDRLs (S/C & LSC)	G	G	G

LAUNCH SITE

	Jan	Feb	Mar
LSSP	G	G	G
Customer Inputs	G	G	G
PPF	G	G	G
Launch Site Unique	G	G	G
Spacecraft OPS	G	G	G

SAFETY & MISSION ASSURANCE

	Jan	Feb	Mar
Mission Assurance	G	G	G
Safety	G	G	G
Quality	G	G	G
Reliability	G	G	G

ENGINEERING

	Jan	Feb	Mar
Launch Vehicle	G	G	G
Mission Specific	Y	Y	Y
Certification	D	N/A	N/A
Mission Analysis	G	G	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	D	N/A	N/A

COMM & TELEMETRY

	Jan	Feb	Mar
Communications	G	G	G
Telemetry	G	G	G

BUSINESS

	Jan	Feb	Mar
Budget	G	G	G
Contracts	G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
D
N/A

DOWNRANGE TELEMETRY

	Jan	Feb	Mar
Ground Stations	G	G	G
Deployables	N/A	N/A	N/A
P-3/OTTR	N/A	N/A	N/A

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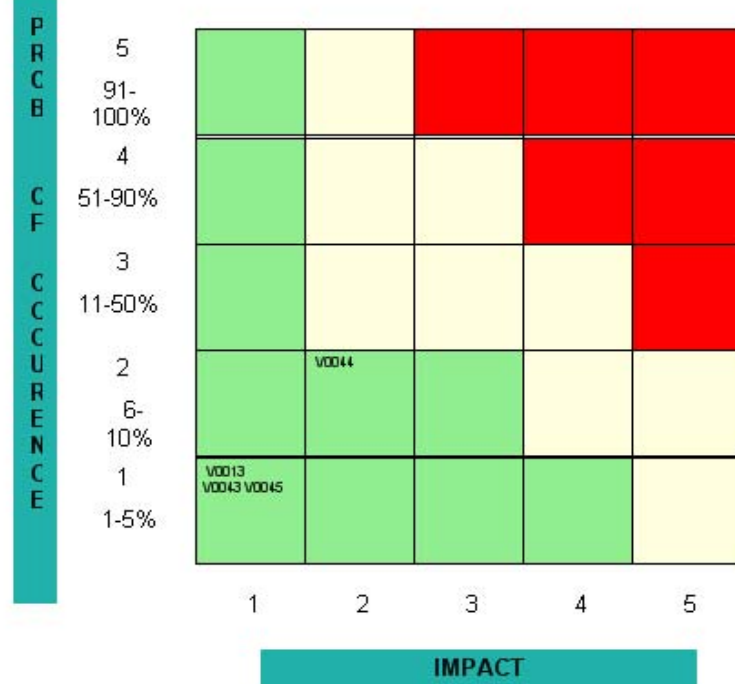


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IBEX - Open/Accepted Risks

LAUNCH SERVICES PROGRAM

		Condition
RYG Trend	RiskID	Consequence
0	V0013	Suspected asymmetric lateral moments encountered at high angle of attack near MACH-1 Loss of vehicle control
0	V0043	LS SMA has noted various deficiencies within Orbital Science Corporations Quality Management System These quality management system deficiencies increase the likelihood that undetected technical problem(s) are present on the flight hardware.
0	V0045	Delamination within Orion nozzle ECL on non-NASA vehicle Adverse heating of structural components leading to nozzle failure
0	V0044	Qualification failures of the frangible ring assembly during ambient and high temperature functionality test Degradation of mission performance due to sections of un-fractured joint causing unclean separation of the payload fairing.



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IBEX - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

There are no Actions.

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/Problem	Open Date	Due Date
Mission Management	O	Launch management for Kwaj campaign	WI	05/01/2006	
Engineering	G	Impact of induced loads from S1/S2 ignition events Initial CLA showed positive margins. Will continue to monitor throughout coupled loads cycles.	WI	09/01/2005	04/19/2008
Engineering	G	Mission unique requirements for spinning (58-60 rpm) separation, motorized lightband sep system, maximized vehicle performance, and triple component payload	WI	05/01/2006	4/19/2008
Engineering	G	RISK V0043 LS SMA has noted various deficiencies within Orbital Science Corporation's Quality Management System. Accepted by LSP for AIM; not yet accepted for IBEX.	RISK	02/06/2008	07/15/2008
Engineering	G	RISK V0045 A delamination has occurred within an Orion nozzle exit cone liner (ECL) on a non-NASA vehicle. Accepted for the AIM mission; not yet accepted for IBEX.	RISK	02/06/2008	07/15/2008
Engineering	Y	Potential technical performance and/or schedule impact of meeting interface flatness requirement of Pegasus avionics section.	WI / RISK	02/15/2008	04/15/2008

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IBEX - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
IBEX MUPDR	09/20/2006-09/20/2006
IBEX CDR	09/12/2006-08/18/2006
MIWG#4/RWG#1 at Kwajalein	10/20/2006-10/27/2006
MUCDR	03/20/2007-03/20/2007
Mission Integration TIM	12/6/2006-12/6/2007
Preliminary Mission Analysis	05/16/2007-08/16/2007
PDU Testing with MLB	01/21/2008-01/25/2008
MIWG #5/RWG#2 at VAFB	05/22/2007-05/23/2007
Delta MUCDR	08/29/2007-08/29/2007
Safety Working Group (SWG) Reconvene in Dulles	10/25/2007-10/25/2007
MLB Separation Test	12/18/2007-02/01/2008
GOWG at VAFB	01/17/2008-01/18/2008
Serial Telemetry Test #1	12/06/2007-12/07/2007
Serial Telemetry Test #2	12/17/2007-02/01/2008
Avionics shim test, study on test article avionics shelf/test on flight avionics unit	01/21/2008-03/17/2008
GOR at VAFB	03/12/2008-03/12/2008

Planned	
Fairing load test pending NASA ERB 04-37	01/21/2008-02/15/2008
IBEX Pre-Ship Review at Dulles	04/17/2008-04/18/2008
Launch Operations Working Group (LOWG)	05/06/2008-05/08/2008

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John F. Kennedy Space Center

IBEX Mission Management

John Calvert

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

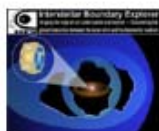
Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD



ICD

There are no signed SCNs

IBEX
2008/07/15
200km target circular, 11 deg
Pegasus
Determined by Arg. of Perig
1555
482.6
Kwajalein

Jan Feb Mar

G	G	G
---	---	---

There are no SCNs in Review

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

Jan Feb Mar

G	G	G
G	G	G
G	G	G
G	G	G
Y	G	G
0	0	0
G	G	G

G	G	G
G	G	G
G	G	G
G	G	G
N/A	N/A	N/A
N/A	N/A	N/A

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

GSFC

Explorers

G. Frazier (GSFC)
Scherrer (SwRI)

Mark Phillips

John Calvert

John Battcher

Jeffrey Ehram

Ken Carr

Michael Johnson

Ralph Mikulas

Tuan Doan

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John F. Kennedy Space Center

IBEX - Engineering

John Battcher

LAUNCH SERVICES PROGRAM

Launch Vehicle

Payload Fairing

First Stage

Second Stage

Third Stage

Payload Attach Fitting

Other

Mission Specific

Certification

Mission Analysis

ERS/ERB

Launch PAD/GSE

Mission Unique IV&V

	Jan	Feb	Mar
	G	G	G
	G	G	G
	G	G	G
	G	G	G
	G	G	G
	0	N/A	N/A
	0	N/A	N/A
	Y	Y	Y
	0	N/A	N/A
	G	G	G
	G	G	G
	G	G	G
	0	N/A	N/A

REQUIREMENT VERIFICATION STATUS

NUMBER OF REQUIREMENTS	164
VERIFIED TO DATE	0

LAUNCH PAD / GSE MODS (IF APPLICABLE)

There are none.

MISSION UNIQUE STUDIES (IF APPLICABLE)

There are none.

Sensitive But Unclassified



John F. Kennedy Space Center

IBEX - Mission ERB Status

John Battcher

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	05-382	IBEX ICD Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	06-368	Pegasus/IBEX Mission Unique CDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-280	Pegasus - IBEX S&A Fairing Door	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-236	Pegasus IBEX Modified Avionics/Transient Li-Ion Battery System	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-202	IBEX Avionics PDU Mission Unique Modification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-309	IBEX - Avionics Structure Interface Requirement	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-279	Pegasus/IBEX - Conax Isolation Valve (First Flight)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sensitive But Unclassified



John F. Kennedy Space Center

IBEX - Vehicle ERB Status

John Battcher

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
G	04-339	Pegasus - Fin Material Manufacturing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	07-270	Pegasus Fin-Pin Redesign	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sensitive But Unclassified



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IBEX - Launch Site

Jeffrey Ehram

LAUNCH SERVICES PROGRAM

	Jan	Feb	Mar
LSSP	G	G	G

LSSP	Planned	Released
Preliminary	02/19/2007	06/15/07
Baseline	11/19/2007	01/02/2008

	Jan	Feb	Mar
CUSTOMER INPUTS	G	G	G

	Jan	Feb	Mar
DELIVERABLES			
Security and Badging	G	G	G
Training and Personnel Cert	G	G	G
Contingency Plans	G	G	G
Safety LSIM	Y	Y	G
Radiation Control	G	G	G
Operational Plans	G	G	G

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Spin table not available at VAFB; Orbital to provide table from Dulles, VA

Contingency hydrazine support at RTS

Range Safety approval for spin balance has been given verbally with caveats on documentation of safety features and analysis that were agreed to at SWG.

PPF

IBEX Principle Investigator requests a low cost PPF; considers commercial PPF cost excessive for SMEX mission; On 29 Nov 2006, IBEX delivered a formal concurrence to use a commercial PPF.

Spacecraft OPS

Jan Feb Mar

G	G	G
---	---	---

G	G	G
---	---	---

G	G	G
---	---	---

G	G	G
---	---	---

G	G	G
---	---	---

G	G	G
---	---	---

G	G	G
---	---	---

Sensitive But Unclassified



John F. Kennedy Space Center

IBEX Budget Breakdown

Ken Carr

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.
-
-

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

Sensitive But Unclassified

^a **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.



John F. Kennedy Space Center

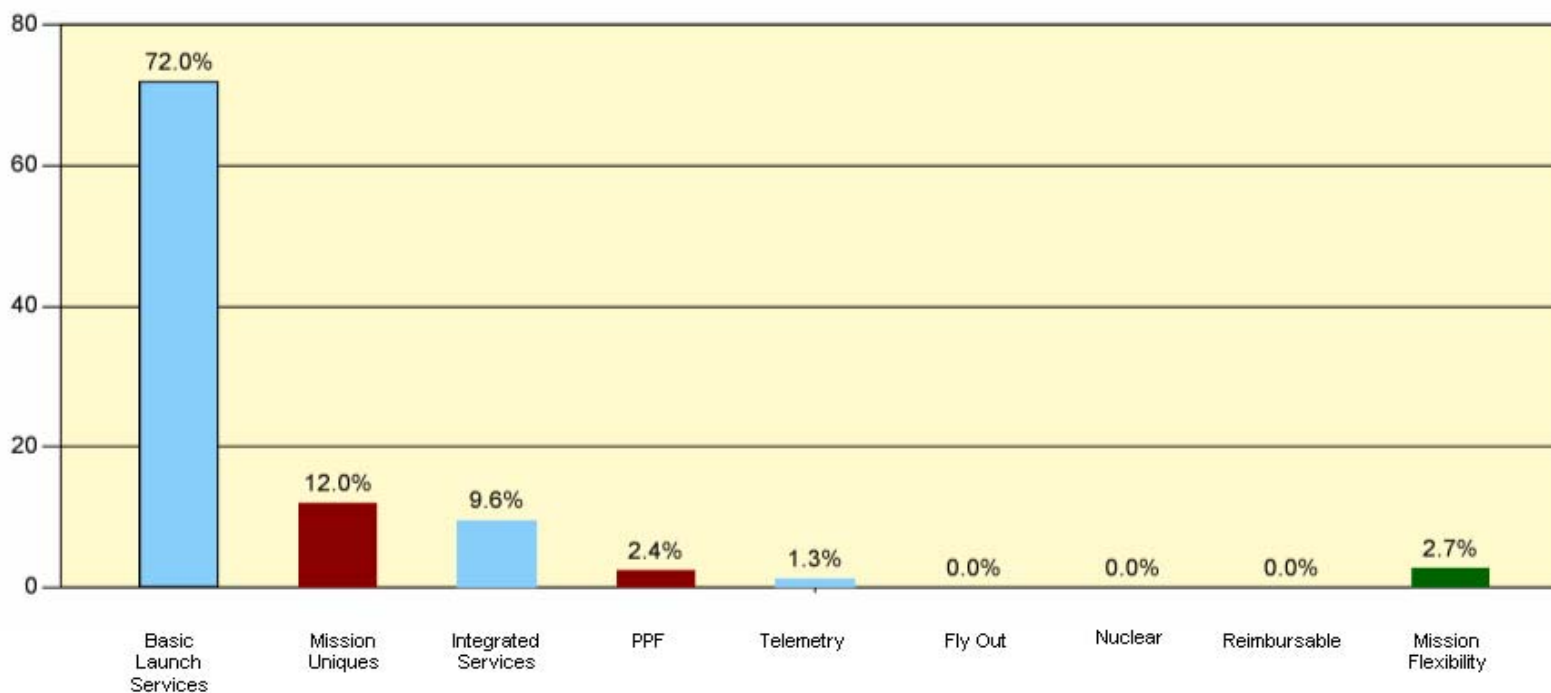
Launch Services Budget Breakdown

IBEX Mission

Ken Carr

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



- No flexibility; cost are fixed
- Limited Flexibility depending on spacecraft requirements
- Flexible portion of budget

Notes:

Variance: PPF on contract reflects lower contract cost than original estimate which increased Mission Flexibility.

Sensitive But Unclassified



John F. Kennedy Space Center

IBEX - Business

Ken Carr

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
G	G	G
G	G	G

Milestone	Date
Milestone 1A	11/1/03
Milestone 1B	9/1/04
Milestone 1C	11/1/04
Milestone 1D	1/1/05
Milestone 2A	9/15/05
Milestone 2B	12/15/05
Milestone 3	8/15/06
Milestone 4	3/15/07
Milestone 5	7/15/07
Milestone 6	1/15/08
Milestone 7	3/15/08
Milestone 8	5/15/08
Milestone 9	8/15/08

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

Contract Status

Launch Services		
Contract Mod	Number	Description
	Mod 11	Launch Delay from 8/15/07 to 6/15/08
	Mod 13	KWAJ launch site option
	Mod 13	Multiple Non-standard services
	Mod 25	Mission Unique Performance enhancements
	Mod 26	S&A upgrade
	Mod 27	2.2 Hydrocarbon Monitoring

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Contract Mod	Number	Description		
	Mod 31	IBEX Launch Delay from 6/15/08 to 7/15/08		
There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	SP-23.001	Coupled Loads Analysis		
	SP-23.002	Separation Analysis		
	SP-23.003	Vehicle Enhancement Study		
	SP-23.004	Separation Analysis		
	SP-23.005	Trajectory & Controls Analysis		
	SP-23.006	Soft-Ride Feasability Study		
	SP-23.007	Early System Safety Support		
	SP-23.008	RF Compatibility Analysis		
	SP-23.009	IBEX CDR support		
	SP-23.011	IBEX Performance Study - Low Altitude Target		
	SP-23.012	Battery Health Check		
	SP-23.013	PDU Testing		
	SP-23.014	ST 2005 Transmitter study		
	SP-23.015	RCS Venting		
	SP-23.016	Mass Dispersion Study		
	SP-23.017	Avionics Shelf Flatness Study		
	SP-23.018	PMA		
	SP-23.019	Propellant Offload Support		
There are no PPF Contract Mods				
There are no Other Contract Mods				
There are no Issues.				

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Center

IBEX - Safety and Mission Assurance

Michael Johnson

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	Jan	Feb	Mar
	Complete	In Work				
Quality				G	G	G
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
Reliability				G	G	G
FMEA	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MU/FF items under review No FMEA/Fishbones/Equivalent have been identified	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In Work (Range Safety).	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Governing docs - 30th & Kwaj.	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In Work - Tailor Safety doc for Kwaj launch	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Waivers/Deviations/Exceptions	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Distribute prior to SARR	G	G	G
Mission Assurance				G	G	G
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time.	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues at this time	G	G	G
Risk Management	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Risk identification and surveillance sufficient for project at this time	G	G	G

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IBEX Comm & Telemetry

Ralph Mikulas and Tuan Doan

LAUNCH SERVICES PROGRAM

Communications

Voice Comm
Data Comm
Networks
Video Comm
Timing
RF Comm
LSSP Comm Annex

Jan Feb Mar

G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

Telemetry

Decommuration Tables
Data Integrity Test
Software Lockdown
Software Inventory
Console Checkout
Console Configuration

Jan Feb Mar

G	G	G
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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GLORY Project Summary

LAUNCH SERVICES PROGRAM

Mission	GLORY
Launch Date	2008/12/15
Launch Vehicle	Taurus
Launch Period Window	TBD
PPF	Commercial PPF

	Jan	Feb	Mar
OVERALL MISSION	Y	Y	Y

MISSION MANAGEMENT

Observatory Status
Manifest/Range
Integrated Schedule
ICD
CDRLs (S/C & LSC)

Jan	Feb	Mar
Y	R	R
G	G	Y
G	G	G
G	G	G
G	G	G

LAUNCH SITE

LSSP
Customer Inputs
PPF
Launch Site Unique
Spacecraft OPS

Jan	Feb	Mar
G	G	G
G	G	G
G	G	Y
G	G	G
G	G	G

SAFETY & MISSION ASSURANCE

Mission Assurance
Safety
Quality
Reliability

Jan	Feb	Mar
G	G	G
G	G	G
Y	Y	Y
G	G	G

ENGINEERING

Launch Vehicle
Mission Specific
Certification
Mission Analysis
ERS/ERB
Launch PAD/GSE
Mission Unique IV&V

G	G	G
G	Y	G
Y	Y	Y
Y	Y	G
G	G	G
G	G	G
N/A	N/A	N/A

COMM & TELEMETRY

Communications
Telemetry

0	0	0
0	0	0

BUSINESS

Budget
Contracts

Y	R	R
G	G	G

DOWNRANGE TELEMETRY

Ground Stations
Deployables
P-3/OTTR

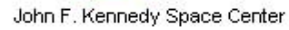
G	G	G
G	G	G
G	G	G

LEGEND

Proceeding on Plan
Area of Concern
Significant Problem
Not Evaluated
Not Applicable

G
Y
R
0
N/A

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LAUNCH SERVICES PROGRAM

PRC B C F C C U R R E N C E

Green	Yellow	Red	Red	Red
Green	Yellow	Yellow	Red	Red
Green	Yellow	Yellow	Yellow	Red
Green	Green	Green	Yellow	Yellow
Green	Green	Green	Green	Yellow

1 2 3 4 5

IMPACT

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GLORY - Actions / Issues / Concerns

LAUNCH SERVICES PROGRAM

Mission Summary Map	G/Y/R	ACTIONS	WI/ERS/Risk/Problem	Open Date	Due Date
Engineering	G	CFD Models generated by LSP indicate a simple change to the ECS duct exit diffuser will adequately redirect flow away from s/c. Model validation in work. Expect SOW to LSG requesting design solution by next PTI. Ref ECS impingement onto APS Earth Shield (T8/T9 Ballast Ring MUCDR action).	ERS	01/31/2008	04/21/2008
Engineering	G	Evaluate potentially high lateral loading identified in the CLA - Analysis on-going, but lateral loads determined to still be within limits and less of a concern than thought before ref T8/T9 Ballast Ring MUCDR action.	ERS	01/31/2008	05/31/2008

Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/Problem	Open Date	Due Date
Engineering	G	Glory electrical requirements at the pad are similar to OCO and also need the facility modification in work for OCO. Make sure modification covers both S/C needs.	ERS	04/17/2007	05/31/2008
Mission Management	O	2/7/2008 update: The Glory project has set a new launch date of 3/1/2009 and the APS instrument is proceeding along a re-baselined plan which supports the Glory mission. Any additional APS cost growth and/or mission impacts will be reported. Glory has indicated there is currently inadequate budget to fund APS cost growth, this could cause an impact to schedule. Glory still holding to current launch date with this issues	WI	04/11/2007	4/3/08
Engineering	G	The MUCDR occurred on 1/31/2008. At the time of the review, Glory had not delivered their calculated tolerance stackup and therefore OSC LSG was unable to finalize the static envelope. To support the MUCDR, LSG estimated a stackup growth of 0.1" and updated the envelope to reflect this value. The associated drawings and ICD will be updated when the Glory stackup value is delivered to LSP. There is still significant dynamic envelope in the area of static exceedence.	WI	8/28/2007	03/31/2008

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Mission Summary Map	G/Y/R	ISSUES / CONCERNS	WI/ERS/Risk/ Problem	Open Date	Due Date
Engineering	G	LSP review of ITA nearly complete, no LSP issues identified. Awaiting formal concurrence from Thermal. LSP 30 day-response is due March 26th.	WI	08/01/2007	03/31/2008
Engineering	G	ICP written to adjust levels based on addition of ballast ring. SC will test to 10 V/m across the entire spectrum out to 18 GHz, based on TIM instrument susceptibility (levels lowered to their ICD based 461C requirements). Old Status: Glory's EMI/EMC test plan is based on MIL std 461C (GSFC GEV). Glory test levels do not ensure the s/c is protected against the general background (established in 461E) and some radiated emissions from the LV. LSP is working with Glory to redefine the test leve	WI	01/09/2008	03/03/2008
Engineering	Y	The Taurus XL Cert Completion Date-VSE and Eng Flight analysis support, 90-95% completion date is behind schedule	WI	01/15/2008	06/30/2008
Mission Management	Y	The Taurus LV currently uses 416 MHz FTS command receivers for range safety. Orbital has been notified by the range to migrate their receivers 421Mhz. Orbital has already placed the 416Mhz receiver on order for OCO and getting ready to order Glory's To charge out the receivers will cause a delay to the Glory mission unless a waiver can be approval to fly the current configuration. LSP Launch Directors are working this issue with other vehicle fleets other then Taurus	WI	2/19/08	6/19/08
Mission Management	Y	WROCC is transitioning from the old MFCC to the new WROCC MFCC beginning 29 Jan 09 and planned to be complete on 29 Mar 09. The current Glory readiness date is 3/1/09 which falls in the middle of the transition period. OSC has withdrawn their delay proposal for March 1st 2009 and contracts are working the options	Problem	3/17/09	6/17/09

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GLORY - Significant Events

LAUNCH SERVICES PROGRAM

Accomplished	
Received update SC model and LSP is performing a base drive analysis. Inputs for LSG received 4/16/2007. Inhouse done and in-work comparing results to LSG and Swales analysis. Difficulties getting data to GSFC	1/31/07-07/31/2007
Master ICD, EICD (with ICP001), and MICD (with ICP001) baselines have been signed.	06/25/2007-10/26/2007
Contract Mod for ballast ring turned on	06/22/2007-7/24/2007
PMA inputs received. PMA has been recieved by LSP and S/C. Currently in review. LSP review is complete and has been recommended to MIM for release (TOD) to Glory.	8/23/07-11/26/2007
MIWG/GOWG at VAFB, delayed from Nov due to uncertainty on PPF processing location. MIWG to be held at GSFC on Nov 28. MIWG 4 held at GSFC on November 28. Meeting was successful. Targeted next GOWG for February 13th.	11/28/07-11/28/07
T8/T9 MUCDR is complete and the board concurred with the design and proceed to manufacturing of the ballast ring. Two significant actions were assigned: Assess s/c sensitivity to any ECS impingement due to the ballast ring implementation (ref ERS 08	1/31/08-1/31/08
Shock test on bus level only has been eliminated at request of S/C	12/7/07-10/17/2007
CLA mission analysis for all 3 requested load cases using the old model were received and sent to s/c in support of their environmental test review for the instrument.	8/25/07-8/28/07

Planned	
Next iteration of MU pad electrical upgrade expected.	1/1/08-06/02/2008
T8/T9 MUSAR	8/28/08
Glory GOWG scheduled for week of May 5, 2008 at VAFB	05/06/2008-05/08/2008
S/C Validated FEM delivery	08/21/2008-08/21/2008
Support S/C shock test and fit check. Testing moved out to accomodate re-baseline of Glory environmental tests.	04/14/2008-07/31/2008

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S/C thermal model (8k nodes) to be delivered to LSG this month. Received spacecraft thermal analysis. LSP reviewed and concurred with analysis after some minor tweaks. Forwarded to LSG.	08/01/2007-11/07/2007
CLA with the new s/c model (received Oct 16 2007) is complete. The CLA has been delivered to LSP and is in review; expected to be delivered to s/c next week.	11/07/2007-01/31/2008
SOW approved for use of PPODS on OCO/Glory missions. Kickoff meeting completed. Successfully presented PPOD/CubeSat orbital affects to the A-Train MOWG.	08/24/2007-03/05/2008
Received payload processing proposals and evaluated them. Discussions with offerors in response to questions generated scheduled for w/o 9/10.	9/5-9/7
ERB for Softride for T8/T9 delayed until December 11th due to the requirement for additional technical details in the ERB package. Agreement reached between technical team (LSP, LSG, CSA) on required inputs for ERB. Ready to proceed to ERB on 12/11	11/29/2007-12/11/2007
Glory project Pre-Environmental Review - approved Project to proceed with Environmental testing.	02/05/2008-03/05/2008
Preliminary Sep Analysis from LSG has been reviewed and approved by LSP. It has been released to Glory and added to Tech Doc.	10/17/2007-12/04/2007
S/C thermal model (8k nodes) to be delivered to LSG this month. Received spacecraft thermal analysis. LSP reviewed and concurred with analysis after some minor tweaks. Forwarded to LSG.	08/01/2007-11/07/2007
Deliver first revision of LSP Verification Matrix to GSFC Glory project at thier request	01/01/2008-02/22/2008

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GLORY Mission Management

Garrett Skrobot

LAUNCH SERVICES PROGRAM

Mission

Launch Date

Orbit Requirement

Launch Vehicle Class

Launch Period Window

PPF

Mass (kg)

PAD

GLORY
2008/12/15
<695 km/98.189 degree inclination
Taurus
TBD
Commercial PPF
528 kg (TB
567E



ICD

Jan Feb Mar

G	G	G
---	---	---

SIGNED SCNS:		SCNS IN REVIEW	
SCN #	DATE SIGNED	SCN #	DATE SIGNED
MICD ICP1	10/10/2007	ICP 1	
EICD ICP1	12/07/2007	ICP2	
		ICP3	
		ICP4	
		ICP5	

Observatory Status

Observatory Status

Schedule

Budget

Deliverables

Testing

ATLO

Instrument

Jan Feb Mar

Y	R	R
Y	R	R
Y	R	R
G	G	G
G	G	G
G	G	G
Y	Y	Y

Launch Vehicle Status

Integrated Schedule

CDRLs (S/C & LSC)

Manifest/Range

Ground Stations

Deployables

P-3/OTTR

G	G	G
G	G	G
G	G	Y
G	G	G
G	G	G
G	G	G

Mission Center:

Program:

PM

LVI

MM

IE

LSIM

PIM

MAM

MCE

MTE

GSFC

ESSP

Bryan Fafaul

John Satrom

Garrett Skrobot

Sarah LeValley

Mark Mertz

Ken Carr

Laura McDaniel

Mike Patton

Nathan Wood

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GLORY - Engineering

Sarah LeValley

LAUNCH SERVICES PROGRAM

	Jan	Feb	Mar
Launch Vehicle	G	G	G
Payload Fairing	G	G	G
First Stage	G	G	G
Second Stage	G	G	G
Third Stage	G	G	G
Payload Attach Fitting	G	G	G
Other	N/A	N/A	N/A
Mission Specific	G	Y	G
Certification	Y	Y	Y
Mission Analysis	Y	Y	G
ERS/ERB	G	G	G
Launch PAD/GSE	G	G	G
Mission Unique IV&V	N/A	N/A	N/A

REQUIREMENT VERIFICATION STATUS	
NUMBER OF REQUIREMENTS	0
VERIFIED TO DATE	20

LAUNCH PAD / GSE MODS (IF APPLICABLE)
There are none.

MISSION UNIQUE STUDIES (IF APPLICABLE)
There are none.

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GLORY - Mission ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	05-381	GLORY Spacecraft Questionnaire	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	06-388	Taurus T8/T9 RCS Moment Arm Issue	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-80	Incorrect Holes Drilled in Critical GSE Separation Test Ring	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-189	T8/T9 Ballast Ring MUPDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-259	Glory ICD Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-302	T-0 purge for Glory and OCO	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-173	Taurus T8/T9 Softride Isolators	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-188	Taurus T8/T9 MURR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-190	Taurus T8/T9 MUCDR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-191	Taurus T8/T9 MUSAR	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	06-328	OCO/Glory EGSE Electrical Harness Pad Upgrade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	08-20	Glory ECS impingement on APS Earth Shield	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
G	08-21	Glory PCA (rev A) lateral/axial coupling	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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GLORY - Vehicle ERB Status

Sarah LeValley

LAUNCH SERVICES PROGRAM

R/Y/G	ERS #	TITLE	ERB Req?		Board Held?			Closure		
			Y	N	Y	N	N/A	AI	ENG.	OCE
0	05-052	SBS/OR Heritage Flight Computer Life Extension	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	04-460	Pegasus-TVC lot 10 cap failure power board	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	06-113	Safe and Arm, Detonator Anomaly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-069	S&A Failure to Rotate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-076	Orion Motor Case Resin Requalification	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-113	Safe & Arm (New Build) Process Review	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-114	Parker TVC H-Bridge Shoot-through during T4 testing	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-138	Taurus Stage 1 TVA Kit Changes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-144	Orion Motor Nozzle Rayon Replacement	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
0	07-169	Taurus - TDRSS Transmitter PDR (LCT2 Xmtr)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
0	07-328	7Ah Avionics Battery, Taurus First Flight, OCO/Glory	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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GLORY - Launch Site

Mark Mertz

LAUNCH SERVICES PROGRAM

LSSP

Jan Feb Mar

G	G	G
---	---	---

LSSP	Planned	Released
Preliminary	07/2007	7/2007
Baseline	07/2008	

CUSTOMER INPUTS

Jan Feb Mar

G	G	G
---	---	---

DELIVERABLES

Jan Feb Mar

Security and Badging
Training and Personnel Cert
Contingency Plans
Safety LSIM
Radiation Control
Operational Plans

G	G	G
G	G	G
G	G	G
G	G	G
G	G	G
G	G	G

UNIQUE REQUIREMENTS

LAUNCH SITE UNIQUE

Jan Feb Mar

G	G	G
---	---	---

PPF

Commercial PPF

G	G	Y
G	G	Y

Spacecraft OPS

Fueling

G	G	G
G	G	G

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GLORY Budget Breakdown

Ken Carr

LAUNCH SERVICES PROGRAM

The launch service budget includes:

* **Launch Services**

- Standard launch Vehicle Services provided by this contract. This line item is firm fixed price and has no flexibility.

* **Mission Uniques**

- Requirements necessary to customize basic vehicle hardware to meet unique s/c driven requirements.
- Other services directly attributable to the mission.
- Contains some flexibility except when technical risk is affected. Spacecraft requirements are the cost driver.

* **Integrated Services**

- LSP contractor support service (ELVIS, CAPPs, JBOSC, KICs, etc).
- USAF range costs attributable to the mission
- Limited flexibility
-

* **Payload Processing Facility**

- Government facility: spacecraft customers are required to be processed in a government facility if the mission is planetary or has nuclear requirements
- Commercial facility: all other missions have been directed to process in a commercial facility;
- Contains some budget flexibility. Additional spacecraft cleanliness requirements or hazardous requirements may increase PPF costs.

* **Telemetry**

- Assets required to meet minimum launch vehicle telemetry requirements.
- Includes fixed and deployable ground stations, instrumented aircraft, and ocean assets.
- Limited flexibility requirements are often set late in the integration cycle.

* **Fly Out**

- Costs that each mission in the 19-Pack must incur.
- Long lead material procurement to mitigate risks due to gaps in production and supplier orders.
- Post-production support for labor skill retention, procure, manufacture, store and maintain under configuration control, mission critical spare parts.
- Pad Sustainability costs for SLC-2 and SLC-17.
- No flexibility-contract costs

* **Nuclear**

- RTG/RHU processing
- RTG/RHU databooks and approval
- Limited flexibility

* **Reimbursable**

- Reimbursable FC for transportation, labor, and CMO.

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^a **Mission Flexibility**

- Portion of the mission budget available for funding additional task assignments, non-standard services or meeting unexpected requirements.



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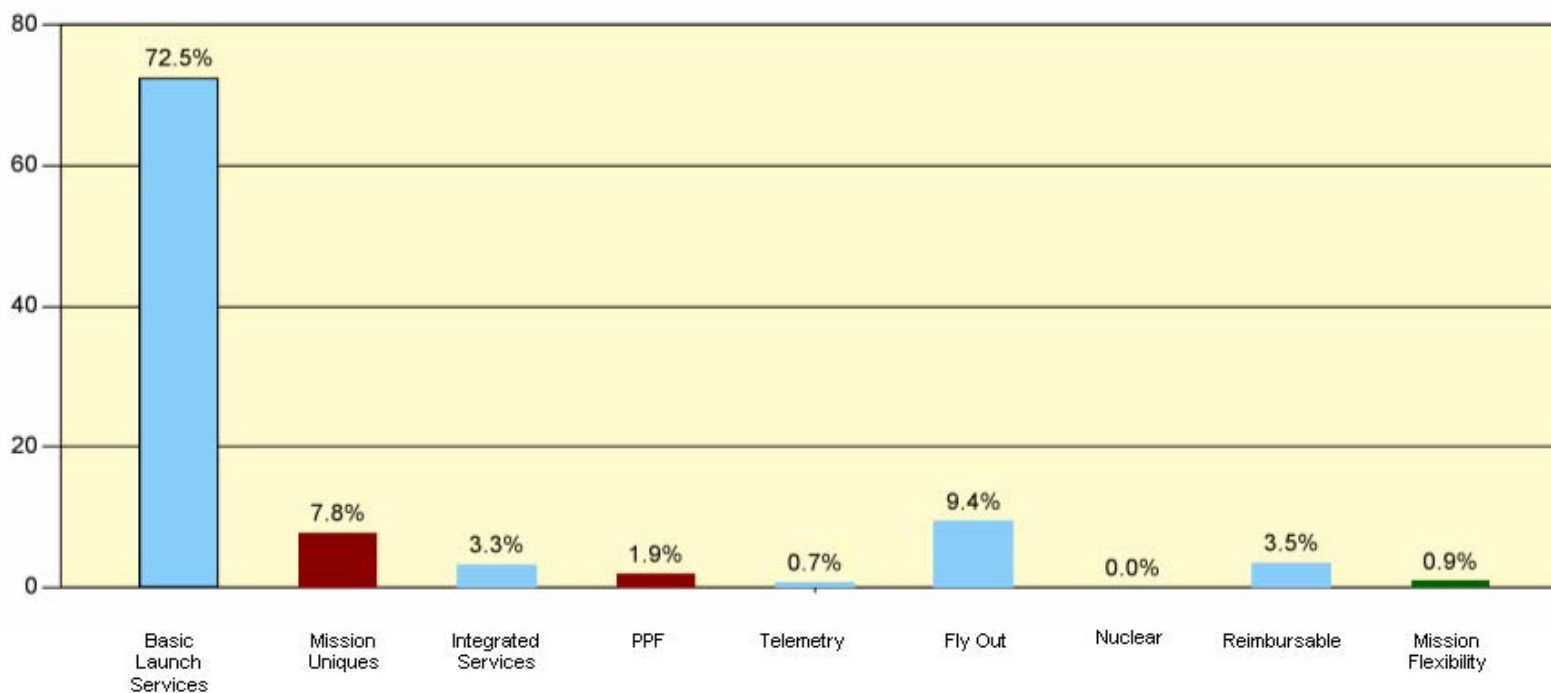
Launch Services Budget Breakdown

GLORY Mission

Ken Carr

LAUNCH SERVICES PROGRAM

% of Total Launch Service Cost - 3 / 2008



No flexibility; cost are fixed

Limited Flexibility depending on spacecraft requirements

Flexible portion of budget

Notes:

Variance: Significant increases in Mission Flexibility due to reduction in liens for PPF and Telemetry and removed lien for additional shock test.

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GLORY - Business

Ken Carr

LAUNCH SERVICES PROGRAM

Budget

Contracts

Jan	Feb	Mar
Y	R	R
G	G	G

Milestone	Date
Milestone 1	11/15/2005
Milestone 2a	02/15/2006
Milestone 2b	06/15/2006
Milestone 3a	10/15/2006
Milestone 4	03/15/2007
Milestone 5	08/15/2007
Milestone 6	11/15/2007
Milestone 7	06/15/2008
Milestone 8a	09/15/2008
Milestone 8b	11/15/2008
Milestone 9	02/15/2009
Milestone 3b	12/15/2006

<input type="checkbox"/>	Open Milestone Payment
<input type="checkbox"/>	Paid Milestone

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Contract Status				
Launch Services				
Contract Mod	Number	Description		
	17	NSS Intrument purge & Payload Isolation System		
	22	Ballast Ring for launch vehicle		
There are no LD Contract Mods				
Task Assignments	Number	Description	Completion Date	Invoice Paid Date
	SP-071	Taurus Isolation Random Vibe Environment		
There are no PPF Contract Mods				
There are no Other Contract Mods				
	Issues			
G	Launch Service budget is green, but due to Spacecraft budget issues the chart reflects a red. This is an issue with MIRS that drives the business section when the spacecraft budget section is modified.			

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GLORY - Safety and Mission Assurance

Laura McDaniel

LAUNCH SERVICES PROGRAM

Assurance Verification Areas	Status		Evidence of Completion	Jan	Feb	Mar
	Complete	In Work				
Quality				Y	Y	Y
Software / Hardware Problems	<input type="checkbox"/>	<input checked="" type="checkbox"/>	The Taurus vehicle is under certification efforts by LS SMA and NASA LSP. Due to outstanding Data Requests for Taurus vendors from previous site visits, all hardware and software fabrication operations are not fully certified.	Y	Y	Y
Alerts	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Audits/Inspections/Surveillances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues or concerns	G	G	G
Limited Life Items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G
Reliability				G	G	G
FMEA/Fishbones/Equivalent	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Failure analyses assessments have been initiated along with vehicle certification planning	G	G	G
Reliability Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Reliability assessment for certification is in progress. Design Reliability Report (DRR) from Orbital was received 11/16/07. The revised DRR (based on TIM comments) is expected before 4/18/08.	G	G	G
Safety				G	G	G
Requirements Definitions	<input type="checkbox"/>	<input checked="" type="checkbox"/>	ICD & Safety documentation tailoring in work	G	G	G
Range Safety & Mission Flight Rules	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In-work (Range Safety)	G	G	G
Licenses/Use Authorizations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	In-work	G	G	G
Safety Documentation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Range Safety Identified Potential Noncompliance (Nov.13.2006): Orbital has addressed (5-18-07) the potential non-compliances as well as other general items and is keeping the pace in resolving these important issues.	G	G	G
Non-compliances	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues identified to date	G	G	G
Contingency Planning	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues (no planning required at this time)	G	G	G
Mission Assurance				G	G	G
Lessons Learned	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No previous NASA Taurus missions - Other KSC LL's will be reviewed/addressed	G	G	G
First Flight/Mission Unique items	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Certification Effort in work	G	G	G
Test/Qualification/Certification	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Certification Effort in work	G	G	G
Mission Assurance Assessments	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No issues	G	G	G

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Risk Management



Risk Management System is working properly



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GLORY Comm & Telemetry

Mike Patton and Nathan Wood

LAUNCH SERVICES PROGRAM

Communications

Voice Comm

Data Comm

Networks

Video Comm

Timing

RF Comm

LSSP Comm Annex

Jan Feb Mar

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

Telemetry

Decommuration Tables

Data Integrity Test

Software Lockdown

Software Inventory

Console Configuration

Console Checkout

Jan Feb Mar

0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0
0	0	0

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